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The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

MAY 6, 1935
Volume 77 Number 8

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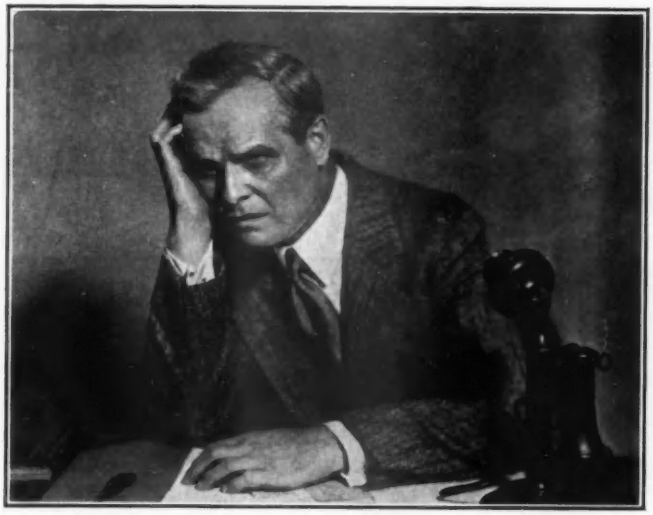

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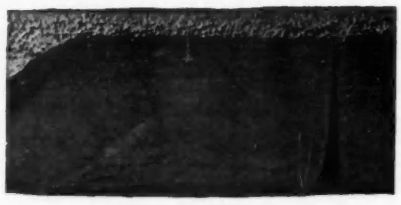

Actual, unretouched photograph of a Baker core.

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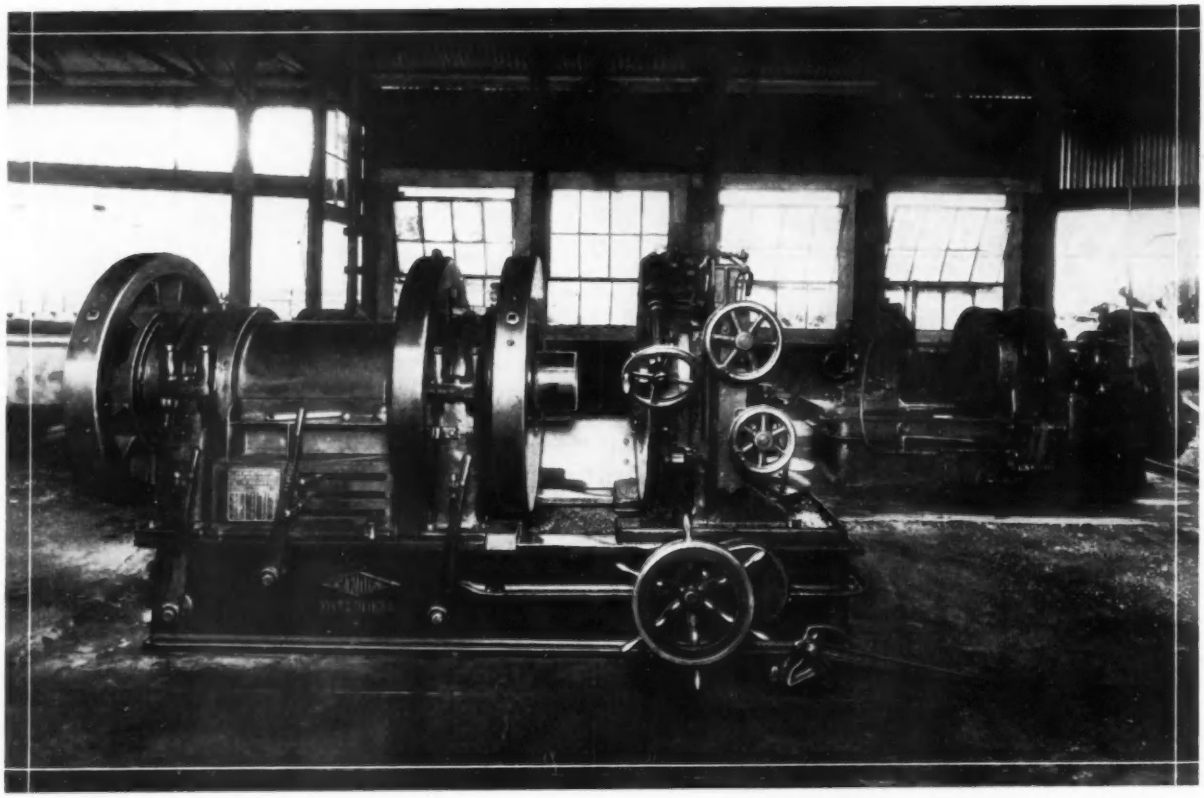
When the "*Going*" Is Tough



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THE OIL WEEKLY

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VOLUME 77, No. 8

MAY 6, 1935

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Changing Panorama

THE now famous Thomas oil control bill, which last week apparently was doomed to be left on the Senate shelve, now is expected to be introduced to the Senate floor, where a bitter fight likely will take place. The past week the bill was revised and despite it now providing for more sweeping control and incorporating suggestions of Administrator Harold L. Ickes, the Senate mines committee passed it out.

Page 12.

More Control Agencies

INDICATIONS that Oil Administrator Harold L. Ickes is preparing to set up in other fields new bodies similar to the recently-established Federal Petroleum Supervisory Agency in East Texas are seen in orders approved last week by President Roosevelt in which the name is changed to "Federal Petroleum Agency No. 1."

The agency is to act as an administrative and investigative agency in connection with "Federal Tender Board No. 1," set up under the Connally act. G. W. Van Fleet was named director of the agency upon its creation last month. The orders authorize the establishment of the agency and outline its duties.

Shipment Control

A THREE judge federal court has upheld the right of the Texas Railroad Commission to control interstate as well as intrastate shipments of illegally produced oil or its products. The court opinion was based on the federal government activities in controlling liquor, and hot oil was classed along with liquor as a nuisance.

A. P. I. Stand

DIRECTORS of Ameican Petroleum Institute definitely went on record Friday as being opposed to all measures attempting to place "straight jackets" on the oil industry. The Institute adopted five principle points, which will be forwarded to Congress in a six-page petition next week. Page 11.

Gas Waste Stopped?

ONE of the most comprehensive oil and gas conservation laws in the United States became effective last Wednesday when Governor James V. Allred signed the Texas gas bill. The use of sweet gas is limited to specified purposes. The law carries provisions for the proration of natural gas on bases never before included in any statute. The commission will consider forma-

The Oil Man's Calendar

MAY
- 6-9 *American Gas Association, Natural Gas Department, Memphis, Tennessee.*
- 8-11 *Oil and Gas Power Division, American Society of Mechanical Engineers, Tulsa, Oklahoma.*
- 14-16 *American Petroleum Institute, Mid-Year Meeting, Mayo Hotel, Tulsa.*
- 20-21 *National Oil Scouts Association, Corpus Christi, Texas.*
- 20-23 *National Association of Purchasing Agents—Oil Buyers' Group Session, Waldorf Astoria Hotel, New York.*

JUNE
- 5-6 *Eastern District, A.P.I. Division of Production, Pittsburgh, Penna.*
- 20-21 *Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.*

SEPTEMBER
- 25-27 *National Petroleum Association, Atlantic City, New Jersey.*

NOVEMBER
- 4-5 *Independent Petroleum Association of America, Annual Meeting, Dallas, Texas.*
- 11-14 *American Petroleum Institute, Annual Meeting, Biltmore Hotel, Los Angeles.*

A view of Gulf Production Company's Taylor 39 showing general set up of rig. See "Unusual Rig" this page.

tion pressure, permeability and porosity of formation and the well's structural location, as well as size of lease and potential producing capacity in allotting production. Page 16.

Statistical Improvement

OF interest and importance is the continued improvement in the industry's statistical position. During April there was a continuation of close balancing of supply and demand, despite crude oil production being substantially higher than the federal allocation. Crude and gasoline stocks remained practically stationary. Of particular significance was the improved price situation, which saw wholesale gasoline prices advance to high levels of the year. The better position of the industry was reflected in drilling statistics, which advanced 20 percent over the previous month, establishing the greatest amount of activity in nearly five years. Page 52.

Air for Power

COMPRESSED air is being used satisfactorily for drilling power in the Elwood, California, field. The compressor plant is located a considerable distance from the drilling operations and the air is piped to ordinary steam equipment being used on the drilling rig. It is kept sufficiently hot by means of a heater installed on the pipe line. This difficulty and others have been overcome by Barnsdall Oil Company engineers through a carefully planned hook-up that is described on page 29.

Unusual Rig

ONE of the most modernly equipped rigs in the Gulf Coast is attracting considerable attention because of the many hook-up innovations included in its design. It has a power plant consisting of two 125-horsepower boilers and a separately fired superheater. Other interesting features about its power plant are the application of stationary power plant principles to an oil field rig. In addition, a unique and modern centralized rig greasing system has been installed, which is an important factor too frequently overlooked. All piping connections have been as simply arranged as possible. It is possible to dismantle all pipe connections with less effort than is generally the case on drilling rigs. All machinery has been placed on specially designed steel skid foundations to aid portability. This interesting rig is described in an article starting on page 33.

Critical Pump Speeds

A SERIES of tests conducted over a period of years by engineers of Chanslor-Canfield Midway Oil Company in the Torrance, California, field has permitted the concern to arrive at the best critical pumping speeds. By determining the most economical pumping speed for individual wells the company has realized large savings. Some wells in the field are being pumped at a speed of three fourths strokes per minute, and the number of strokes has been reduced in practically every instance over those previously used. While the tests and conclusions used in the Torrance experiment may not be applicable to all fields, a study of the methods employed will permit other operators to base similar studies on the work done. A comprehensive article detailing methods used and the resulting savings commences on page 21.

Compliments to Pratt

WALLACE E. PRATT, vice president, Humble Oil & Refining Company, in addressing members of the Petroleum Engineering Club at the University of Texas last week, gave a most timely, comprehensive and encouraging address. It was directed mainly to the young men present, who are students of petroleum engineering. After hearing the address, Dean Taylor, of the engineering department, in commendation of Mr. Pratt's address stated he had been listening to commencement addresses during the past 40 years and that Mr. Pratt's remarks were one of the most outstanding delivered to a University of Texas audience.

Higher Earnings Expected

First quarter profits this year are comparable with those last year, and second quarter prospects are especially bright. Earnings in 1935 are generally expected to exceed those of 1934, which was the best year since 1930.

JACK LOGAN
Associate Editor

FIGURES, like actions, speak louder than words. The figures that are available on company earnings in the first quarter of this year speak of further progress out of the depression; of better results this year than last; of the best showings for several years by oil companies as well as concerns in practically all other industries.

Profitable First Quarter

SOME oil companies, in common with many concerns in other industries, fared better in the first quarter of 1935 than in that period last year. This means that they had the best first quarter results for five years—since 1930.

The favorable first quarter results were achieved despite considerable instability of the oil markets in the opening two months of this year. The gasoline markets, wholesale and retail, began showing noteworthy strength, however, at the beginning of March. Prices entered then upon a decided upward trend, and were still rising as the quarter ended.

The refined oil prices have made still further gains in April and May, and the crude oil market has grown increasingly strong, giving promise of especially profitable results in the 1935 second quarter.

A complete picture of financial results for the oil industry in the first three months is not available. For numerous companies do not issue quarterly reports, while the reports of concerns that do make such reports are not yet all available.

Generally favorable first quarter results for oil companies are evidenced, however, by reports that are available and by statistics on prices, volume of business, and so forth.

SEABOARD Oil Company of Delaware reported net profit of $439,177, or 35 cents a share, in the 1935 first quarter, compared with $368,219, or 29 cents a share, in the March quarter last year. Superior Oil Corporation showed profit of $81,561 in the 1935 first quarter, compared with $74,594 last year. Union Oil Company of California had first quarter net profit of $1,350,000, or 31 cents a share, this year, compared with $500,000, or 11 cents a share, last year, due to better prices for products and larger sales and production. (Union Oil earned its 25-cent first quarter dividend requirement for the first time since 1931.) Associated Oil Company showed first quarter net profit of $932,300, or 41 cents a share, this year, compared with $718,208, or 31 cents a share, last year. Companies operating on the West Coast had stable markets the first quarter this year, in contrast with price wars early last year.

Smaller Profits for Others

BY virtue of the disturbed markets and relatively low wholesale and retail prices of products east of the Rockies in January and February, first quarter results were not as good this year as last year for some Middle-Western and Eastern integrated companies and concerns specializing in refining and marketing. Tide Water Oil Company, for example, reported first quarter net profit of $571,006, or 15 cents a share, this year, compared with $1,001,969, or 35 cents a share, last year. Atlantic Refining Company is expected to show only a slight profit, or possibly a record of about breaking even, in the 1935 first quarter, whereas it had net profit of $613,000, or 23 cents a share, in the 1934 first quarter. Standard Oil Company (Indiana), judging by the trend of gasoline prices, did not have as satisfactory first quarter results this year as last year. (The company does not issue quarterly reports.) The company's second quarter prospects, however, are very bright, considering the sharp rise of product prices in its territory during March, April, and May.

General Business Improvement

THE first quarter of 1935 brought favorable earnings records for industry in general, it is indicated. The *Wall Street Journal* recently analyzed reports and

estimates of 1935 first quarter earnings of a selected group of 24 representative corporations, and found that the concerns had the best results for five years—since the first quarter of 1930.

The aggregate three-months' earnings of the group were approximately $18,850,000, compared with profit of $4,295,139 in 1934, loss of $10,412,753 in 1933, loss of $8,624,863 in 1932, and profit of $2,194,841 in 1931. Comparison with 1930 was available for 22 companies in the group, and they showed first quarter earnings of $15,701,879 this year, against $23,456,930 in 1930. The 18 companies in the group affording comparison with 1929 had first quarter earnings of $10,992,712 this year, compared with $26,322,264 in 1929.

This general picture of earnings is especially significant to the oil industry. For while the survey included only one oil company, it reflected particularly the high rate of activity this year in the automobile industry, which paves the way for much of the consumption of petroleum products. Of the 24 companies, seven were automobile or automobile parts producers, and six were in the steel industry. The one oil company included (Seaboard Oil) was among a group of five concerns for which 1929 first quarter earnings figures were not available, but which showed in 1935 the highest first quarter profits on record.

Earnings Prospects for 1935 Good

THERE has been further confirmation of the general optimism among oil company executives concerning the industry's future, discussed in these columns April 15, page 9. The discussion at that time was based on statements embodied lately in annual reports of 15 oil companies. Similar sanguine sentiment has also been reflected in the recent statements of two other oil company executives, in connection with annual reports to stockholders covering 1934. The reference is to statements of Edward G. Seubert, president of Standard Oil Company (Indiana) and John M. Lovejoy, president of Seaboard Oil Company.

The Standard of Indiana report showed slightly higher earnings in 1934 than in 1933, and contained this statement: " . . . encouraged by faith that powerful forces for natural recovery are now exerting their influence, your management is proceeding with its task with considerable hopefulness that even more favorable returns may be gained in the current year than have been reported for 1934."

Mr. Lovejoy told the Seaboard stockholders: "We look forward for this company to somewhat better earnings than reported last year." (The company reported slightly higher profit for 1934 than for 1933.)

CONTINUING, Mr. Lovejoy stated, "Difficulties of the past year have been chiefly in getting prices of gasoline commensurate with prices for crude oil, and apparently in the last month the industry has been able to get prices of refined products more in balance with prices for crude oil than has been possible in the last year, with the result that the industry, I think, as a whole, is doing pretty well.

"The hot oil problem in East Texas is in better shape than it has been for some time; so I think, looking forward to the year, we should not have any great difficulties."

Problems Needing Correction

SOME concise statements on the oil industry's problems, as well as its prospects, were incorporated in the Standard of Indiana report. Comment was made on the successful balancing of supply with demand in 1934, which resulted in a 17-million barrel decrease in stocks. It was then stated:

"Failure of improvement in statistical position to cause a marked increase in prices, and consequently, in the industry's earnings, is due partly to lag in the effects from change in the basic supply-demand relation, but more largely to the continued demoralizing effect of 'hot oil' production in East Texas . . . While the authorities were hampered by adverse court decisions in their efforts to stop the flow of 'hot oil' in 1934, recent remedial legislation promises more enduring success for their efforts in the future. It is the hope of the industry that application of this basic remedy will remove one of the main causes for the astonishing disproportion between the crude price and the price at which products are sold to the consumer. If, in addition, control of gasoline tax evasion can be further tightened, dumping of surpluses can be stopped, and taxation is not increased, prospects for the future will be visibly brighter."

Protest Against High Taxes

STANDARD Oil Company (Indiana) joined in the protest of numerous other oil companies in protesting high taxes on oils and the oil industry. It pointed out that while its net profit in 1934 was $18,949,680, or $1.25 a share, it earned and collected taxes for federal, state, and local governments totaling $74,339,449, or the equivalent of $4.88 to every share of stock.

Discussing taxation in more detail, the report embodied these statements: "The point may be raised that the oil companies do not pay sales taxes, the gasoline taxes, the federal excise taxes, but merely collect them from consumers. It is impossible to tell to what degree that is true, and to what extent the taxes are a diversion of income which the companies might otherwise be able to obtain for their products, instead of selling at a loss as they often do. There can be no question that the taxation of the oil industry has long since passed the point up to which it could be justified as fair recompense to government agencies for protection and service provided in connection with the functions served by the industry . . . If it had not been for the industry's

(*Continued on page* 56)

A. P. I. Opposes Federal Control

Directors of Institute Vote for Policy Giving Industry More Freedom

CHICAGO, ILL., MAY 3.

DIRECTORS of the American Petroleum Institute, meeting in an eight-hour session here Friday, unanimously adopted a petition to Congress opposing the Harrison Bill and similar "economic straight jackets" providing for enlargement of the NIRA, urging that government of oil producing states be encouraged to exert their power to regulate production of crude oil and natural gas, and suggesting a course of action for the federal government in enacting legislation directly affecting the petroleum industry.

The six-page petition, which is to be filed with Congress next week, established five principles which, the board of directors said, materially would assist in stabilizing conditions under which the petroleum industry can operate to direct advantage of both makers and users of petroleum products.

The first principle called for a minimum of regulation so that private industry may be free to serve the public most efficiently and economically.

The second principle urged encouragement of state governments in regulating production of crude oil and natural gas to prevent waste.

The third principle suggested that the federal government, having power to deal with interstate and foreign commerce and to authorize interstate compacts, supplement production control of the states by making permanent and enforcing the Connally law prohibiting the shipment of "hot oil," by approving interstate compacts already ratified by five states, by directing the U. S. Bureau of Mines to ascertain crude oil production necessary to meet demand, and by exercising control of imports to a proper ratio to domestic production.

The fourth principle held that in the case of marketing operations there is no reason to select the petroleum industry for special federal intervention, and urged that industrial pacts and agreements voluntarily made by any industry to eleminate unfair methods of competition be permitted.

The fifth principle declared that "any such economic straight jacket" as is contained in Senate Bill 2445 or similar proposals for enlargement of the NIRA, would "serve to increase the price of gasoline and demoralize the industry."

The petition struck at the suggestion that the petroleum industry be made a public utility by declaring that while it is the duty and obligation of government to prevent the waste of crude oil and thereby conserve the national supply "there is nothing in the inherent nature of petroleum or in the conduct of the business which requires or justifies the oil industry being declared a public utility any more than in the case of any other producer or manufacturer of a commodity of general use."

D. J. MORAN

Declaring that sufficient progress has been made toward recovery to necessitate the consideration of methods of orderly development of business as a substitute for devices created in emergency and desperation, the petition stated that the time has come to take a long-range view of American economic progress.

"The oil industry is prepared to do its part," the petition stated in conclusion, "and to demonstrate confidenec in itself and in the future of the country, if it can but know clearly that its efforts are not to be checkmated by constant change, bureaucratic dictation or ursurpation of power. Congress has an unparalleled opportunity to aid recovery by a frank recognition of separate fields of federal and state responsibility under the constitution."

D. J. Moran Elected Treasurer of A. P. I.

Chicago, Ill. — American Petroleum Institute directors Friday elected D. J. Moran, Continental Oil Company, New York, treasurer of the institute to succeed Frank Phillips, Phillips Petroleum Company, New York, who has resigned. C. M. Boggs, Kanotex Refining Company, Arkansas City, Kansas, was elected a director to succeed Howard Bennette, deceased. Harry A. Logan, United Refining Company, Warren, Pennsylvania, was elected a director to succeed Frank Fretter, deceased. Both directory terms expire in 1936.

Postpone Texas Anti-Trust Law Revision

Austin, Texas.—The Texas Senate last week declined to take up out of its regular order a bill by Senator Weaver Moore designed to revise the Texas anti-trust laws.

Moore told the Senate that his bill would undoubtedly prevent the continuation of farm and stockmen's cooperatives which are now operating in Texas.

Thomas Control Bill Is Revised

Committee Sends Senate Bill Providing Stricter Control; Fight Expected

WASHINGTON, D. C.

MATERIALLY revised in many important respects, the Thomas oil bill today was submitted to the Senate by the committee on mines without comment, for such action as the Senate may see fit to take.

Unable to agree among themselves, the members of the committee decided to bring the bill in without a report. Left thus to the Senate, it is generally believed that the bill will fail to secure the support necessary for passage.

As rewriten, the bill is considered to give the secretary of the interior powers much broader than originally contemplated, the proposed federal petroleum board, which was to have been an independent body, being made a part of the interior department.

The board would have complete authority over production, even in states operating under compacts. This latter is accomplished by a provision authorizing the President to suspend such compacts under certain conditions, whereupon regulation of production would be exercised by the board.

A specific prohibition against the fixing of prices by the board was written into the bill.

The revised bill provides for a petroleum board of five members, as the original measure, but cuts their salary from the $12,000 per annum which it was proposed to give them to $9000. The members are to be appointed by the President, and the secretary of the interior is not to be a member, as he would under the original proposal, but the board is to be "set up in the Interior Department and shall function under the general supervision of the secretary of the interior."

To make easier the computation of permissable imports, the committee changed from 13.53 to 13.5 percent the allowable proportion of imports of crude oil and refined products.

Broadening the base for the determination of production allocations, the committee amended the bill to require "equitable" instead of "reasonable" allocations among the producing states and wrote into the bill a requirement that in the determination of demand allowance shall be made for reasonable seasonal variations and for proper fluctations in stocks to meet them.

The committee also wrote in a provision that "the board shall not be authorized to fix prices at which petroleum or petroleum products thereof shall be sold, nor to make any determination or recommendation which will unreasonably increase or decrease prices; but in estimating demand it shall do so with reference to reasonable prices only, and the necessity for the maintenance thereof over the maximum possible period."

Interstate Compacts

The original provision on interstate compacts, which provided merely for the approval of such agreements, was eliminated and an entirely new section substituted, as follows:

"The consent of Congress is given hereby to an interstate compact to conserve oil and gas, executed in the City of Dallas, Texas, the 16th day of February, 1935, by the representatives of the States of Oklahoma, Texas, California and New Mexico, and there recommended for ratification by representatives of the States of Arkansas, Colorado, Illionos, Kansas and Michigan, and since ratified by the States of New Mexico, Kansas, Oklahoma and Texas, for the purpose of conserving oil and gas and preventing the avoidable waste thereof within reasonable limitations by the prevention of physical waste by the means specified in Article III and IV of said compact, which compact is now deposited in the Department of State of the United States: provided that, nothing therein or herein contained shall impair or in any manner affect,, or be construed as impairing or in any manner affecting, any right, power or jurisdiction of the United States: and provided further, that in the event it shall be found by the board created by Section 2 of this act, at a hearing to which the governors of all the compacting states, or their respective representatives, are invited to attend, that the compacting states, through the operation of said compact or agency or commission thereunder, and not as individual states, are limiting the production or threatening to limit the production of or commerce in crude petroleum or its products to the market demand or consumer demand therefor, or are in any manner so restricting production of petroleum or commerce in petroleum or its products as to burden or restrict or to threaten to burden or restrict interstate commerce in petroleum or petroleum products, or if it is found at said hearing that the operation of said compact or agency or commission thereunder or any determination or recommendation by representatives appointed thereto will, or will threaten to, fix the price of petroleum or create or perpetuate monolopy in the production of oil and gas, it shall so certify to the President, who shall by proclamation suspend the operation of said compact pending further consideration by the Congress which may under said circumstances, or for any other reason, or at any other time, withdraw its consent to and terminate said compact: and provided further, that a certified record of the proceedings of each and every meeting of the interstate oil compact commission, constituted in Article VI of said compact, or representatives appointed thereto, shall be transmitted within ten days after the close of such meetings to the President or any agency of the United States which he may designate and that such certified record shall be available for inspection by any duly authorized agent of any state or of the United States."

Amendment of the provisions for the fixing of quotas provides that so long as production in any state is kept within its allocation through orders of the state authorities, no quotas shall be fixed for pools, fields, leases or properties.

Under a new provision in the section providing for the establishment of quotas in commerce in the event that production in any state exceeds its allocation, the petroleum board is to limit its quota orders "to particular areas or particular sources of supply if the board finds it unnecessary to include other areas or sources of supply in fairly accomplishing the limitation of supply herein provided for." The quota prescribed for any such source of supply shall be equal to its just and equitable portion of total demand.

Certificates of cleanance are to be required for crude petroleum from areas placed under commerce quotas, and a provision was written into the bill authorizing the federal tender board or any other agency created under the Connally act to issue such certificates upon request of the Federal Petroleum Board.

A new section providing for state production control was incorporated in the bill, under which:

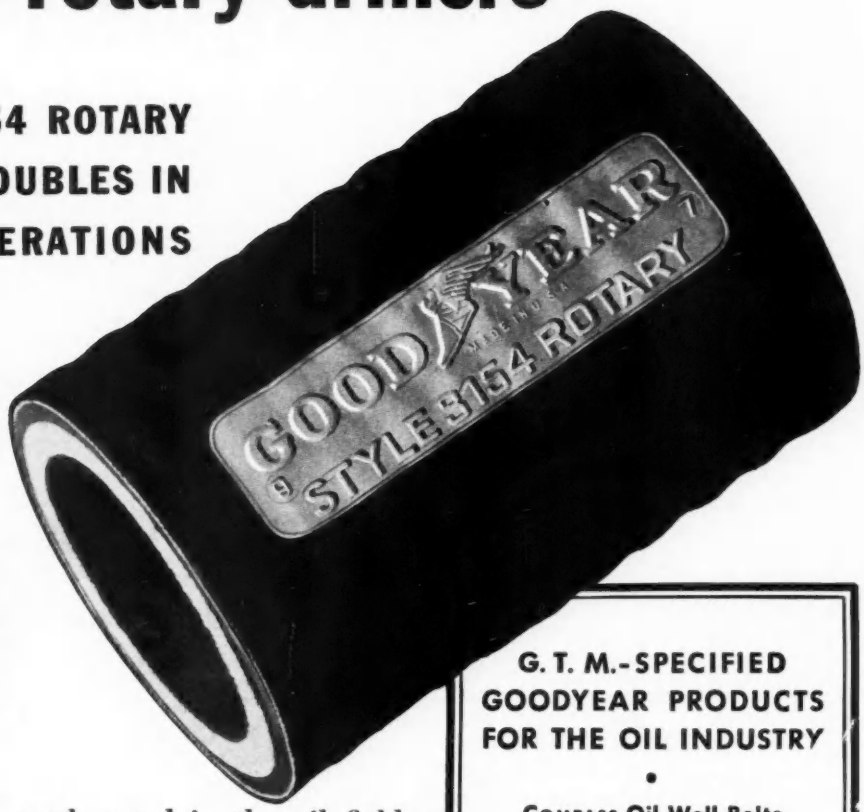
"In any state in which there is or hereafter shall be under state law a duly constituted

(*Continued on page 62*)

"IT'S THE TOP"

...say rotary drillers

GOODYEAR STYLE 3154 ROTARY ELIMINATES HOSE TROUBLES IN HIGH PRESSURE OPERATIONS



YOU don't have to worry about bursting or hose failure with Goodyear Style 3154 Rotary Hose on the job. Ask any veteran driller.

It's a brute of a hose for heman jobs—*extra strong* to handle safely high working pressures—*extra tough* to combat the knockabout abuse hose gets around the derricks—*supple* to withstand constant flexing.

Its tube is specially compounded to resist the abrasive action of slush water, grit and oil. Its many-plied heavy duck carcass is DOUBLY *reinforced with* TWO *layers of high-tensile, rust-proofed, braided steel wire, spiraled in opposite directions. Its cover is the sturdiest ever put on a hose.*

Job-fitted by GTM

This service-proved construction is the result of Goodyear's long experience in working with oil producers. Both Goodyear belts and hose have made good in the oil fields because they are made right—and are individually specified to the job by the G.T.M.—Goodyear Technical Man.

Many oil men consult this practical expert regularly because experience proves his recommendations cut costs, eliminate breakdowns, speed up operations. To bring him, write Goodyear, Akron, Ohio, or Los Angeles, Calif.—or the nearest Goodyear Mechanical Rubber Goods Distributor.

G. T. M.-SPECIFIED GOODYEAR PRODUCTS FOR THE OIL INDUSTRY

- COMPASS Oil Well Belts (Both Single and Double Construction)
- COMPASS Endless Belts
- THOR Transmission Belts (Seamless)
- Goodyear Conveyor Belts (For Handling Fuller's Earth)
- Style 3154 Rotary Hose
- Goodyear Cargo Loading Hose
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  Service Station Pump Hose
  Service Station Air Hose

Made by the makers of Goodyear Tires

THE GREATEST NAME IN RUBBER

GOODYEAR

BELTS · MOLDED GOODS · HOSE · PACKING

C. of C. Studies Oil Situation

Regimentation *Must Be Avoided If Progress to Reach* Oil Industry

» » » » STATES WALLACE E. PRATT

Washington, D. C.—Private initiative must be left free and stabilization efforts must avoid regimentation if the oil industry is to make progress, members of the United States Chamber of Commerce were warned May 1 by Wallace E. Pratt, vice president of the Humble Oil & Refining Company, Houston.

Speaking before the round table meeting on natural resources, Mr. Pratt revealed that the production of oil, on the whole, has not been a profitable venture.

"Individual units in the industry have, of course, made large profits from time to time, through good fortune, or efficiency, or some other cause," he explained. "On the whole, however, the industry has operated at a loss.

"This experience of the oil-producing industry throws a revealing light on the practical operation of the capitalistic system. Impelled solely by the profit motive, the oil-producing industry has served society efficiently and adequately, judged by the standard of prices paid by the consumer, through one generation after another, yet the whole service has been rendered at less than average cost. Communism denounces capitalism for its profit motive, and would supplant it with a profitless economy, yet in this instance capitalism has successfully carried out a formidable undertaking against great odds without any overall profit. It is worth while to realize that even when no actual profit is forthcoming, the lure of a possible profit, the hope of a future profit, is incredibly effective in spurring men on to vigorous and sustained effort."

Despite its achievements, however, Mr. Pratt declared, the record of the oil industry reveals certain weaknesses. Among other things, it has not been profitable to the average producer and it has had to contend with recurrent periods of both shortage and over-supply.

"Because of these weaknesses its need for stabilization has long been recognized, and various methods for stabilizing it have been suggested," he said.

When the industry seeks to stabilize itself, it asks for no privilege or concession that is not already accorded to other industries but, because of unique factors in the industry, asks only to be enabled to control its production of crude and keep its withdrawals in step with demand.

"A number of politically-minded observers charge that control of production is merely a device to secure higher prices," he continued. "It is not inherently such a device, and its use for such a purpose should not be tolerated. It will serve and should be used as a device for lowering costs and for doing equity between competing owners in a single pool."

Pointing out that the best method of control is that of unit operation, Mr. Pratt suggested that in the absence of compulsory unit operation the best practical method of providing for production was suggested three years ago by W. S. Farish, and involves relief from state antitrust laws to permit voluntary agreements among competitors in individual pools; relief from Federal antitrust statutes to permit restriction of production to ascertain demand; enactment of state conservation statutes, involving restriction of production to reasonable

(*Continued on Page 58*)

Reasonable Legislation *Is Hope For Success of* Recovery Acts

» » » » STATES C. B. AMES

Washington, D. C.—The American public has repudiated NIRA, NRA and the Blue Eagle, "tired of the bungling effort of Washington bureaucracy to regiment American business," C. B. Ames, chairman of the board of the Texas Company, told members of the United States Chamber of Commerce April 30.

Speaking at a luncheon meeting discussing business under codes, Mr. Ames declared that "the effort to impair the rights of the states, the effort to concentrate power in Washington, the effort to enlarge the authority of the President, the effort to by-pass the Constitution have challenged the foundation of our constitutional system."

The "distinct weight of opinion" among business men, as ascertained by the studies which have been made by various committees on which he has served, Mr. Ames said, holds that the present recovery act should be allowed to expire in June, with enactment prior to its expiration of a substitute for one or two years which would permit voluntary codes. No compulsory imposition or amendment of codes should be permitted, the act should contain suitable provisions for agreements between competitors which would be free from the penalties of the anti-trust laws, and code approval and administration should be under the general jurisdiction of a quasi-judicial body.

Business, he said, believes that the provision for collective bargaining has been abused by organized labor, has encouraged promotors of strikes, and has definitely disproved its worth, and also believes "that the effort to force obedience to codes by extra-judicial methods such as the Blue Eagle and withholding Government contracts and appeals to the public prejudice are contrary to the traditions of an independent people."

"If this analysis of the possibilities and limitations of code regulation is correct," Mr. Ames asserted, "then there is no reason for the statute being limited to one year, or two years, but it should be made permanent. If, however, we are to have a re-enactment of the confused jumble of Title I of NIRA, it should be limited to one year so that Congress may substitute for it reasonable legislation at the next session."

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Pampa Wichita Falls, Texas McPherson Wichita, Kansas
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Moore PUMPING *Equipment*

DERRICKS SUBSTRUCTURES HANGERS WALKING BEAMS SAMSON POSTS JACK POSTS BULL AND CALF WHEEL POSTS
WHEELS PITMANS IMPROVED BEARINGS CROWN BLOCKS PORTABLE PUMPING UNITS CLEAN-OUT MACHINES WINCHES

Gas Bill *Governing Wastage In Texas Panhandle* Is Passed

Austin, Texas.—A new law affecting the production of gas in Texas, especially in the gigantic Panhandle field, passed both houses of the Legislature and was signed by Governor James V. Allred. Since the vote in both houses was greater than a two thirds majority, the statute became effective last Wednesday morning when the governor signed.

The law is probably the most comprehensive piece of legislation ever attempted in the conservation of either oil or gas. The primary purpose of the statute is to set up the means whereby the sweet gas in the Panhandle can be used for light and fuel only, still permitting the use of sour gas for carbon black. Waste of either type of gas by blowing it into the air after it has been processed has been forbidden entirely. This is probably the outstanding feature of the new bill.

Determined efforts were made by operators in the Pledger field, Brazoria County, and the Refugio field, Refugio County, to write into the bill a clause that would permit gas stripped by plants in those fields to be blown into the air. This plan was defeated at every turn, and by decisive votes members of both houses indicated that they had no intention of permitting another situation to arise similar to that which they were seeking to correct in the Panhandle.

The use of sweet gas is limited to the following: Light or fuel; efficient chemical manufacturing, other than the manufacture of carbon black; bona fide introduction of gas into oil or gas bearing horizon in order to maintain or increase the rock pressure or otherwise increase the ultimate recovery of oil or gas from such horizon; the extraction of natural gasoline therefrom when the residue is returned to the horizon from which it is produced.

Sour gas may be used for all the above purposes, and "the manufacture of carbon black provided it is utilized in a plant producing a recovery of not less than one pound of carbon black to each 1000 cubic feet of gas, and provided further that the gasoline content is removed and saved from such sour gas before the same is utilized for carbon black."

Sweet or sour gas may be used for gas lift, providing the gas-oil ratio does not exceed 10,000/1, unless especially permitted by the Texas Railroad Commission. Under such a permit the gas used in excess of 10,000/1 must be stripped and the residue burned for carbon black.

During January and July of each year gas well operators are required to test their wells to determine the open flow and rock pressure, and a report of these tests must be filed with the railroad commission.

Proration of Gas

The law carries specific provisions for the proration of natural gas on bases never before included in any statute for the purposes of (1) the prevention of "waste" as waste is defined, and (2) in the adjustment of "correlative rights and opportunities of each owner of gas in a common reservoir" to produce and use or sell such gas as permitted.

The commission would prorate on the second basis listed above "when evidence introduced at a hearing to be held as herein provided will support a finding made by the commission that the aggregate lawful volume of the open flow or daily potential capacity to produce of all gas wells located in a common reservoir, is in excess of the daily reasonable market demand for gas from gas wells that may be produced from such common reservoir . . . "

Monthly hearings are to be held and monthly allowables for the wells are to be fixed by the commission.

In fixing allowables, the commission is required to take into consideration the following factors:

1. The size of the tract segregated with respect to surface ownership upon which such gas well or wells are located;

2. The relation between the daily producing capacity of each gas well and the aggregate capa[illegible]

(*Continued on Page 58*)

Natural Gasoline *Association Elects T. R. Goebel* New President

Tulsa.—The fourteenth annual convention of the Natural Gasoline Association of America, held at the Mayo Hotel, was welcomed by W. G. Skelly, president of Skelly Oil Company at its opening session Wednesday afternoon, May 1. He commended the association for its technical and practical activities in the furthering of more widespread and appreciative utilization of natural gasoline by the refining branch of the industry and by the motoring public. He complimented the association upon its foresight in the matter of its present technical program wherein several leading technologists and engineers within and from outside the industry are presented in conjunction with scientists and engineers from the automotive and petroleum refining industry. This gathering together of men representing various phases of the manufacturing, marketing and utilization problems affecting natural gasoline, at a place where their mutual and individual technical and practical problems can be brought out into open discussion and interchange of ideas can not help but prove of real and lasting help to all concerned, he stated.

T. R. Goebel, executive assistant, Skelly Oil Company, Tulsa, was elected president of the Natural Gasoline Association of America, succeeding Chris Williams, Continental Oil Company, Ponca City, who has served as president during the past two years. R. E. Haylett, Union Oil Company of California, was elected first vice president; Fred F. Ketchum of the gas department, Owens-Libby-Owens, second vice president, and W. E. Rearden, Columbian Gasoline Corporation, Monroe, third vice president. W. F. Lowe continues as secretary.

D. C. Williams, Continental Oil Company, retiring president of the association, reviewed progress made by the association, and its various committees during

(*Continued on Page 54*)

Photo by S. L. Rivkin

T. R. GOEBEL

MEN IN THE INDUSTRY'S NEWS

JOHN A. ROWE

Newly Appointed Purchasing Agent for Humble Oil & Refining Company.

JOHN A. ROWE has been appointed purchasing agent for Humble Oil & Refining Company with headquarters in Houston. He succeeds J. M. Sitler, who has been promoted to a position with Standard Oil Company of New Jersey in New York City. Mr. Rome has been with the Humble Company purchasing department for the past 16 years. Mr. Sitler came to Houston from New York six years ago.

M. H. GOODE, Fort Worth operator and former vice president in charge of the land department of Marland Oil Company of Texas, has been appointed head of the land department for Rancho Oil Company, which is owned by the Josey interests. Headquarters of the Rancho Oil Company are to be transferred shortly from Fort Worth to Dallas, where space has been leased in the First National Bank Building.

C. B. WRIGHTSMAN, president of Standard Oil Company of Kansas, is establishing his permanent residence in San Antonio. His several companies have developed considerable production in South Texas and at this time are launching an extensive drilling campaign.

GLENN S. DILLE, chief stratigrapher in the Kansas-Oklahoma-Kentucky division of The Texas Company, is the new president of the Tulsa Stratigraphic Society, succeeding Robert M. Whiteside of Shell Petroleum Corporation. J. A. Border, Pure Oil Company, former secretary-treasurer, succeeded Ronald Cullen of Twin State Oil Company as the new vice president and Ed Minnis, Tide Water Oil Company, is the new secretary-treasurer.

JOHN M. VETTER, geologist, of Houston, has opened an office in the Second National Bank Building, and will do consulting work. In addition, he will continue to do geological work for Rio Bravo Oil Company, representing that company in the future on a retainer basis.

W. B. FERGUSON, of Brenham, Texas, geologist for Sun Oil Company, was the speaker at the Houston Geological Society's weekly meeting May 2. He discussed the subdivision of the Miocene beds in Washington County, Texas.

J. B. GRAHAM, superintendent of field forces for National Tube Company, Pittsburgh, Pa., spent several days in Kansas and Oklahoma on a business trip which included the west coast.

W. L. HINDS, superintendent of production for Amerada Petroleum Corporation in the Gulf Coast district, with headquarters at Houston, has resigned to organize a core drill contracting company to operate from Dallas. He has been succeeded by H. E. Wallace, former production foreman for Amerada Petroleum Corporation in the Tomball field.

E. R. WOODWARD, technical adviser in the chemical sales department of The Barrett Company, 40 Rector Street, N. Y., is in the Mid-Continent area contacting the refining industry.

RONALD RAMSON, scout for Skelly Oil Company in its Pampa, Texas district, has been transferred to Ada, Oklahoma, to succeed "Jake" Julian who recently resigned to enter the scouting department of Continental Oil Company.

L. R. THAWLEY, production engineer for Phillips Petroleum Company, has been made division production engineer with headquarters at Wichita, Kansas, succeeding Robert Wright who was transferred to Oklahoma City. He is a brother of W. R. Thawley, chief scout for Gypsy Oil Company.

C. E. EDGERTON, of Wilcox Oil & Gas Company, has moved from Houston to San Antonio. His residence address is the Plaza Hotel.

D. A. HOLM, geologist for Carter Oil Company, has been transferred from the Ada, Oklahoma, to the Wichita, Kansas, district.

J. A. KAMMERDINER of Los Angeles spent most of April visiting his mother and other relatives in Pennsylvania, accompanied by his daughter, Miss Ruth.

A. E. NAVARRO, of Monterrey, N. L., Mexico, interested in the development of gas properties in the State of Coahuila, Mexico, has moved to San Antonio.

T. E. SWIGART, vice president of Shell Petroleum Corporation, Houston, and B. C. Clardy, crude oil representative, are spending the week in St. Louis.

ALEXANDER GOLDSMITH, independent operator from Tulsa, Oklahoma, has been in South Texas during the last several weeks inspecting fields.

J. M. HANSELL, geologist, has been transferred to the San Antonio division of Sun Oil Company.

J. F. LUCEY, president of Lucey Petroleum Company, Dallas, has been visiting the Rio Grande Valley looking over the oil situation.

CECIL HAGEN, who recently became associated with Eastland Oil Company, has made his residence in San Antonio at 810 West Craig Place. This company is drilling an important wildcat in the "Hill Country."

PAUL MEADERS, independent operator of San Antonio, is in Fort Worth.

DR. EDWARD R. WEIDLEIN, director of Mellon Institute of Research at Pittsburgh, Pennsylvania, has been awarded the Chemical Industry Medal for 1935. This award is made annually to a person

who has made a valuable application of chemical research to industry. Presentation of the medal will be made at a meeting of the American Section of the Society of Chemical Industry in the fall.

K. S. "BOOTS" ADAMS, Bartlesville, Oklahoma, has been elected treasurer and a member of the board of directors of Phillips Petroleum Company, which marks another step upward in the rapid climb of one of the oil industry's younger executives. Since August, 1932, Adams has been assistant to President Frank Phillips, a position which he will retain along with his duties as treasurer and member of the board. Born in Horton, Kansas, August 31, 1899, Adams moved at an early age to Kansas City, Kansas, where he received his grade and high school education. He matriculated at the University of Kansas in 1917 carrying with him a successful high school athletic record in four sports. After one year at the University, he became a member of the Field Artillery Officers Training School, Camp Zachary Taylor, Louisville, Kentucky, where he remained until after the Armistice was signed. He returned immediately to K. U. to finish the 1918 football season as halfback. In November, 1919, Adams went to work in the warehouse and material departments of Phillips Petroleum Company. He transferred to the production division in 1922, where he remained for four years, working in the Burbank field and in the Bartlesville office as assistant to the operations manager. Leaving the production department in 1926, he took charge of the field payroll in the accounting section and in the latter part of that year was made assistant chief clerk of the accounting division. In 1927 Adams was elected assistant secretary and the following year was also appointed assistant treasurer, holding these positions in the treasury department until his appointment as assistant to Mr. Phillips in August, 1932.

K. S. ADAMS

B. F. (FRANK) STRADLEY, Bartlesville, Oklahoma, who was elevated to be secretary of Phillips Petroleum Company at the annual meeting, April 30, is a Jayhawker born, who went to Missouri for his education and to Oklahoma for his career. Born in Caney, Kansas, September 27, 1901, Stradley attended the Caney grade and high schools matriculating at the University of Missouri in 1920. After receiving his A.B. in 1924, Stradley came to Bartlesville, Oklahoma, and entered the employ of Phillips Petroleum Company in September. After a year and one half in the oil accounting department, Stradley entered the cashier's department in the spring of 1926. When Phillips entered the marketing end of the industry, in the fall of 1927, Stradley was made assistant to the head of the marketing accounting division, where he remained until February 29, when he was transferred to Springfield, Missouri, as division credit manager, before Phillips' Springfield division was divided between their present St. Louis and Kansas City divisions. In November, 1929, Stradley was transferred back to Bartlesville as assistant general credit manager. In the summer of 1932 Stradley was lifted out of the credit department to become assistant secretary and assistant treasurer of the company, a position which he held until his recent election as secretary and assistant treasurer.

B. F. STRADLEY

DIED:

CHARLES F. COMSTOCK, 60 years old, gas superintendent for Pure Oil Company, died in his sleep on Saturday, April 27, at his home in Tulsa. Comstock was born at Illion, N. Y., in 1875, and came to Nowata, Oklahoma, in 1908 to become associated with the Hartman and Thompson Oil Company. Ten years later he moved to Tulsa to become associated with the Oklahoma Producing & Refining Company. Upon consolidation of that organization with Pure Oil Company he became an employe of the latter. Death was due to heart attack.

Humble Makes Changes In Operating Department

Houston.—The following changes were made in the supervisory force of Humble Oil & Refining Company during the month of April:

J. H. Galloway, Jr., district petroleum engineer in the Government Wells district, was transferred to the Dickinson district as district petroleum engineer, effective April 23, replacing Paul L. McGee.

B. R. Gossett, formerly in charge of drilling operations in the Kittrell district, was transferred to the Livingston district, effective April 22, as tool pusher in charge of drilling operations.

Neal Reavis, formerly gangpusher in the Tomball district, was transferred from that district and promoted to farm boss of the Kittrell district, effective April 22, where he will be in charge of production.

Jack M. Miller, district petroleum engineer in charge of the Hilbig repressuring plant, was transferred to the Government Wells district as district petroleum engineer, effective April 23, replacing J. H. Galloway, Jr.

W. J. Brown, toolpusher in the Anahuac district, was transferred to the Thompsons district, replacing T. G. Roach as district superintendent, effective May 1.

Effective May 1, T. G. Roach, district superintendent in the Thompsons district, was transferred to the Roanoke district, replacing D. W. Wofford.

Effective May 1, D. W. Wofford, in charge of operations in the Roanoke district, was transferred to the Crowley district, where he will be in charge of drilling operations, replacing E. E. Williams.

E. E. Williams, formerly in charge of operations in the Crowley district, was transferred to the Anahuac district as toolpusher, effective May 1, replacing W. J. Brown.

NEW IN SIZE

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NEW IN PERFORMANCE

The 24 inch CRESTOLOY WRENCH

What a Wrench! **Twenty-four inches long: weighs nine pounds: opens to 2 7/16 inches. Built for tough jobs . . . made to start in where the little fellows leave off.**

And this wrench is as trim as it is husky. Well-balanced, easy to use. Quick-adjusting, precision-fitting jaws provide that famous Crescent *safety-fit* on any nut up to 1 1/2″ U S Std. The handle design is new . . . tapering slightly from the head to permit the use of pipe handle extensions. Yes sir, this tool is built for *work* . . . and lots of it.

The steel, of course, is CRESTOLOY. That accounts for the unusual strength and clean-limbed design. Finish is chrome-plate, with heads polished bright . . . smooth, durable, easy on hand and eye alike. Price . . $7.50. Ask your supplier or write today for literature and test data.

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That's the routine test given every individual 24 inch Crestoloy Wrench. Destruction Tests prove this wrench capable of loads up to 2900 lbs. . . . more than the weight of a 1935 Ford car suspended from the handle hole.

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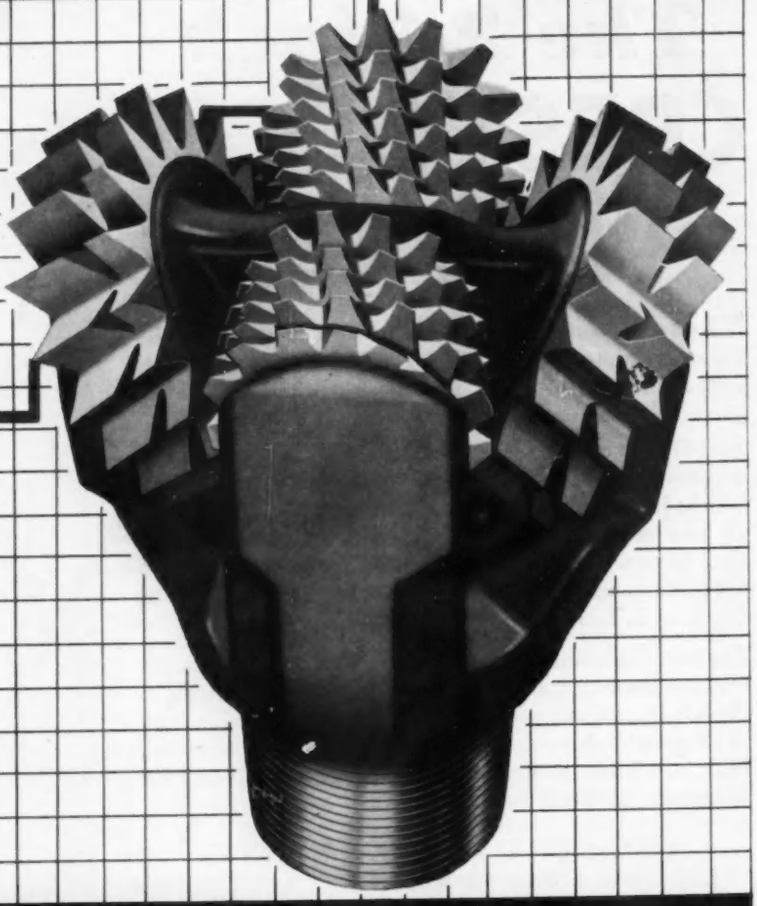
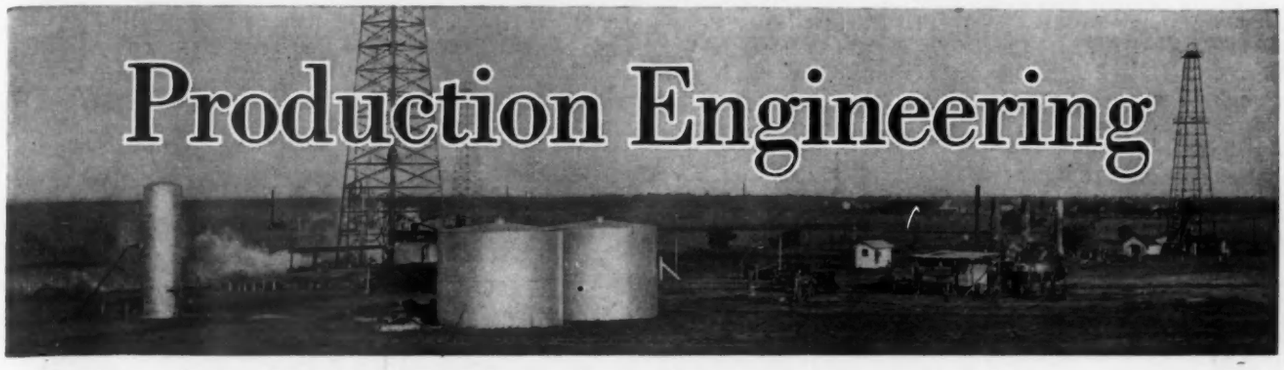
FEET DUG PER DAY GOES UP



FEET OF HOLE DRILLED

DRILLING DAYS



Critical Pumping Speed

Determinations Found to

Reduce Lifting Costs

JOHN C. ALBRIGHT

CHANSLOR-CANFIELD Midway Oil Company began a series of tests as early as 1924 in order to determine the best methods to be used for the reduction of pumping costs in the Torrance field, which if found satisfactory would be applied to all pumping wells in that field as well as other districts where it had oil production. During the time when the oil from the Torrance field was being produced by reservoir pressure, the overall cost of production did not appear to be expensive, but when the gas pressure was reduced to a point where it was necessary to lift the oil with tubing and rods, lease expense began to show as a noticeable item.

The wells had been originally equipped with standard motors having a rating of 15/35 horsepower, which were found to be rather large for ordinary pumping. These motors were equipped with reduction gears with a 30-tooth sprocket on the shaft. A chain was used in transmission of power to the band wheel that was equipped with a sprocket having 120 teeth. The speed of pumping was controlled through the manipulation of the motor control equipment setting it to run on the second point. A considerable loss, or waste, of power was found to exist which was represented by heat dissipated and escaping to the air through the motor grids.

It was determined that if the controllers could be operated on the ninth point instead of the second point, considerable power could be conserved. Consequently, to test out this theory, one of the wells was selected which had been equipped with a 30-tooth sprocket on the reduction gear shaft, and had been operated to allow a rod stroke of 17 per minute. A sprocket having 21 teeth was obtained to replace the one with 30 teeth which allowed a rod stroke of 17 per minute with the motor controller on the ninth point. A polyphase watthour meter was used in measuring the power required, and the test consumed 17 days, at the end of which 1544 K. W. H. had been consumed. After this test, conducted with the original 30-tooth sprocket and the controller on the second point, the check test was conducted.

Operating the well with identical equipment, under conditions as they were in the first test, the controller on the ninth point showed that the well had consumed 1278.5 K. W. H. In the first 17-day test, the average K. W. load was 3.78 while during the second test with the smaller sprocket, the average K. W. load was 3.13, showing a difference of .65 K. W. per hour. This amount of power saved when multiplied by the number of wells the company operated amounted to a considerable item. The reduction gear boxes were of two different speeds, one of which had a ratio of five to one and the other four to one, the five to one having the 30-tooth driving sprocket and the four to one being equipped with a 24-tooth sprocket.

After this comparatively small saving was shown, further attempts were made to reduce material, labor and power requirements. A few of the wells were fitted with delicate control instruments designed to allow intermittent pumping without requiring the pumper to visit the well at regular intervals to start and stop the motors. This method was not altogether satisfactory from a production standpoint, because the wells would not head up sufficiently to allow the oil to flow through the drainage channels set up in the productive formation fast enough to secure the maximum amount of oil. The instruments, being quite sensitive would develop trouble which required more or less supervision of a trained electrician, and the saving over straight production was not enough to justify maintenance.

Slow Pumping.

After this method had been given a sufficient trial to convince the engineers of its desirable and undesirable features, they instituted a program of slow pumping. By slow

pumping, as the term is used by them, the wells are pumped at a beam speed of from three fourths of a stroke per minute to as fast as 15 strokes per minute. When the higher pumping speeds are encountered, the term of slow pumping loses its meaning and the wells are said to be pumping at a reduced speed.

Several factors were found to effect slow pumping, and which also determined to a large extent the number of strokes at which a well should be operated. Each well is considered to be an individual and is treated as such, because of the physical condition, in relation to equipment, and the condition of the drainage channels leading from the productive formation to the hole. From the investigations carried out in the experiments, enough data was procurred to lead the test engineers to believe that each well should produce its oil to a better advantage and more economically if operated at a certain speed, which might be termed its critical pumping speed.

To further demonstrate this fact, one of the wells producing in the Torrance field was selected. It was fitted with the usual equipment to allow an average rod speed of 18.50 strokes per minute with a length of 32 inches. It had been producing 24 barrels per day with this equipment operated in the above manner. The smallest possible sprocket was fitted to the shaft of the reduction gear to reduce the pumping speed from 18.50 strokes per minute to 7.32 strokes per minute with the motor controller placed on the ninth point. It was determined from experience and from calculations that this speed was about right for a well producing 58½ barrels of oil per day at a 50 percent volumetric efficiency, depth, diameter of plunger, length of stroke, etc., taken into consideration.

Based on the engineering calculations, it was determined that the well should be operated at a speed of three strokes per minute to produce the normal amount of oil coming from the well, taking into consideration a pumping efficiency of 50 percent. To verify this, the well was equipped with a jack placed in the setup to produce a speed of 2.73 strokes per minute giving a length of stroke of 36 inches. It pumped 25.06 barrels of oil during the test which represented a volumetric efficiency of 51 percent for the depth.

Critical Pumping Saving.

A tabulation was prepared to show the possible saving if the critical pumping speed should be applied to all the wells in the Torrance district, the average as shown below being taken from an operating period of 12 months.

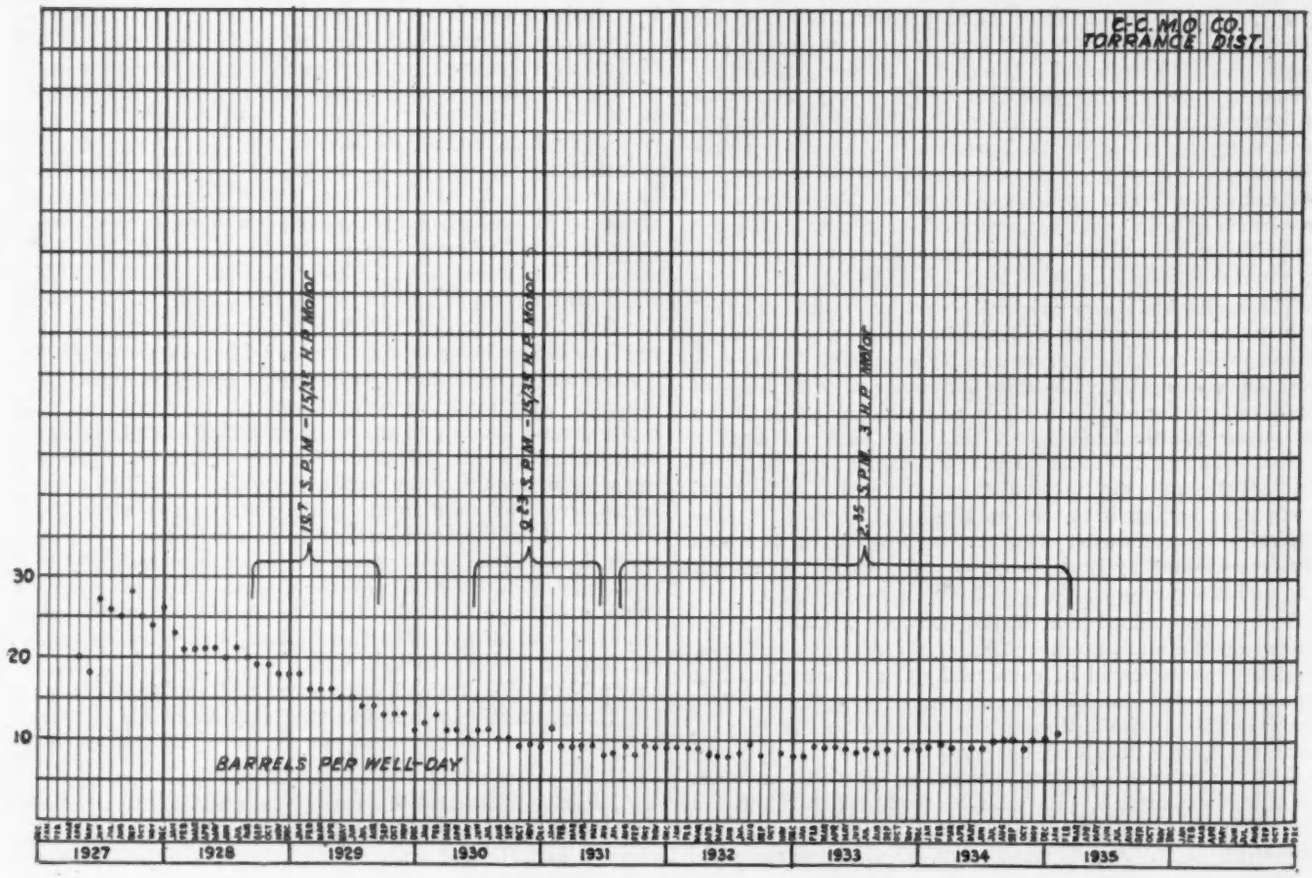
Average pumping speed, strokes per minute	19.70
Average depth of pumping wells	2885′
Average barrels pumped per day	35.72
Average calculated pumping speed required for normal average production at 50 percent volumetric efficiency, strokes per minute	3.91

The average of the well expense is also tabulated below, which is set out in percentage instead of dollars and cents.

Average power cost per well per month	29.07%
Average labor cost per well per month	54.47%
Average material cost per well per month	16.46%
Average total cost per well per month	100.00%

It was agreed that there are savings other than power by operating wells at the critical pumping speed which are apparently intangible. It is reasonable to expect that the greater number of strokes at which a well is pumped, the greater will be the wear on rig equipment, pumps, tubing, rods, etc. The average power costs have been estimated from information gathered, to be 33 percent of the cost

Chart showing pumping record of one well in the Torrance field



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when operating the wells at the popular speed of approximately 20 strokes per minute, but is not in proportion to the reduction of pumping speed for the reason that it requires a certain amount of power to move the equipment, regardless of the work being accomplished and they could not be considered the same as labor and material. In the following tabulation, it has been assumed that the operating cost for material and labor would be reduced in proportion to the pumping speed reduction.

Average pumping speed, strokes per minute	3.91
Average depth of wells being pumped	2885′
Average barrels pumped per day	35.72
Average power cost per well per month	40.23%
Average labor cost per well per month	46.15%
Average material cost per well per month	13.62%
Total average cost per well per month	100.00%

To illustrate the representative costs of the wells taken as a whole, when operated at the approximate speed of 20 strokes per minute, compared to the same group of wells when pumped at the critical speed, it is necessary to set up a theoretical sum, which, we will say is $142.79. Then, the tabulations may be broken up as follows:

Wells operated at the actual speed of 19.70 strokes per minute.	
Power costs	$41.18
Labor costs	78.44
Material costs	23.17
Total monthly cost	$142.79

If, when operated at the critical pumping speed of 3.91 strokes per minute, the tabulation will be as follows:

Power costs	$13.59
Labor costs	15.59
Material costs	4.60
Total monthly cost	$33.78

This theoretical sum shows a saving of $109.01 per well per month, which in itself represents a considerable sum when multiplied by the number of wells being operated.

When it had been proved through the operation of this particular well at a reduced speed, approximating the critical pumping speed, that a large saving could be obtained, other wells were equipped to obtain the slower speed of the rods. It was not considered the best practice to go from an established method to one not yet thoroughly proved by equipping all the wells with material to obtain such a great reduction in pumping speed without testing it further. Consequently, a well was equipped with a 15-tooth sprocket placed on the shaft of the reduction gear which at the same motor speed as before, gave a rod speed of 13 strokes per minute. Operation was considered satisfactory and others were so equipped to obtain the slower rod travel.

One well was taken as representative of the various tests made, and it will be followed through the several tests. This well was tested as follows:

September 1928 to August 1929, period	12 months
K. W. H. per month	4,521
Cost of power, per month	$42.63
Cost of labor, per month	36.05
Cost of material	14.40
Total cost per month	$93.08

The well had the following equipment:

Depth	2805′
Tubing size	3″
Rod size	¾″
Pump size	2½″
Driving sprocket, teeth	24
Strokes per minute	19.7
Length of stroke	32″
Oil gravity, °A. P. I.	22.0

From a period of a second 12 months, the following was found:

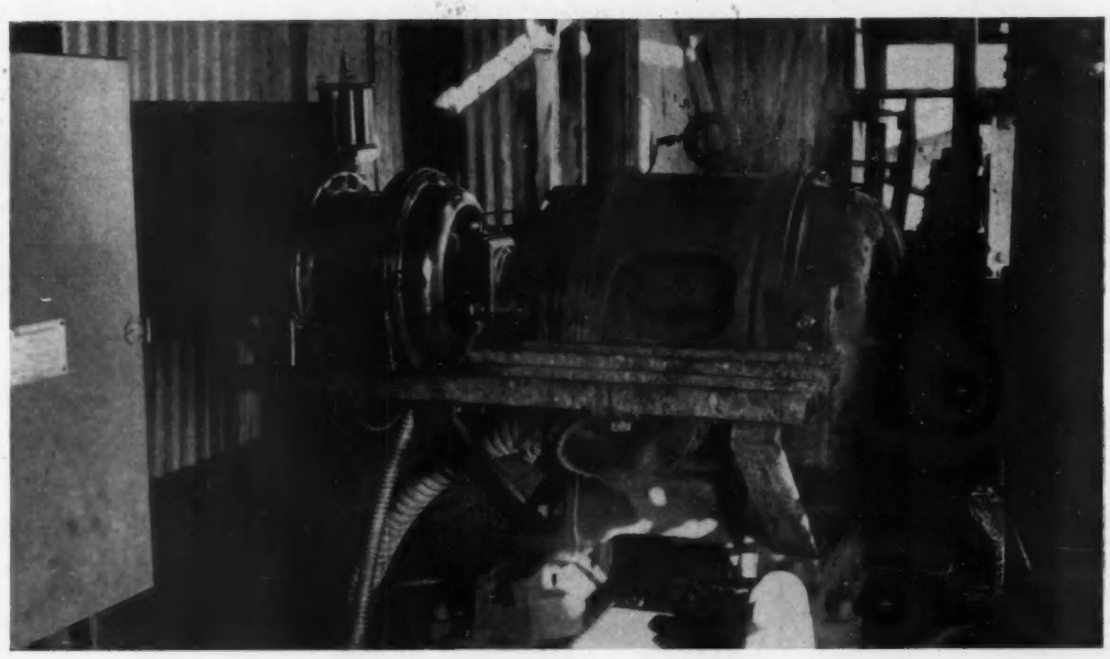
June 1930 to May 1931:	
Period, months	12
K. W. H. per month	2,094
Cost of power, per month	$17.83
Cost of labor, per month	5.90
Cost of material	2.06
Total cost per month	$25.79

The well had the following equipment:

Depth	2805′
Tubing size	3″
Rod size	⅞″
Pump size	2½″
Driving sprocket, teeth	9
Strokes per minute	9.23
Length of stroke	32″
Oil gravity, °A. P. I.	20.6
The total percentage of saving was as follows:	
Total saving changing from No. 1 to No. 2	72.29%
Power saving changing from No. 1 to No. 2	58.17%
Labor and material, No. 1 to No. 2	84.22%

These tests demonstrated that the saving of all three

Small motor mounted with large one to provide slow or critical pumping speeds



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items could be reduced materially, but it was also demonstrated that it was not economical to operate the large motor originally installed in the rig. It was desirable to maintain the large motor in place, however, for pulling and other operations, so a small motor was selected which was mounted on a bracket attached to the larger motor. To obtain a drive from the smaller motor, a sprocket was attached to the free end of the motor shaft so a double 5/8-inch roller chain could be used in the transmission of power. In this manner, the shaft and armature of the larger motor is used as an auxiliary shaft, no power being used from the larger motor.

In a following period of testing the following was found:

August 1931 to July 1932:	
Period, months	12
K. W. H. per month	606
Cost of power, per month	$5.47
Cost of labor, per month	4.30
Cost of material	1.73
Total cost per month	$11.50

The following equipment was on the well:

Depth	2805′
Tubing size	3″
Rod size	¾″
Pump size	2½″
Driving sprocket, tooth size	9
Strokes per minute	2.35
Length of stroke	32″
Oil gravity, ° A. P. I.	22.3

In addition, a three horsepower motor was used, mounted as described above.

The following savings were found to exist:

Total saving changing from No. 2 to No. 3	55.41%
Power saving changing from No. 2 to No. 3	69.32%
Labor and material, from No. 2 to No. 3	24.25%
Total saving when changing from No. 1 to No. 3	87.65%
Power saving when changing from No. 1 to No. 2	87.17%
Labor and material changing from No. 1 to No. 3	88.05%

Summary.

When these savings had been shown, other wells in the Torrance field, as well as in other districts, were changed from the old method of pumping to the newer critical pumping speed with results which have justified the expense of material necessary. Other wells, particularly in the Midway field, have been pumped successfully at speeds as low as three-fourths stroke per minute.

According to the test engineers of Chanslor-Canfield Midway Oil Company, the critical pumping speed of wells is not the same for each individual case. There is a critical speed which will produce the maximum amount of oil from a producing zone, but that speed will be governed by a number of variables. The depth at which the well was completed must be taken into consideration as well as the amount of water which is necessary to remove with the oil. When water is encountered, cutting is eliminated to a certain extent due to less agitation. If gas is produced freely with the oil, some wells of that character must be pumped at a greater rate of speed to eliminate gas lock. Sand troubles are minimized, but when a sand is encountered that has a tendency to settle and pack in the pump when slow pumping is practiced, a faster travel must be maintained to keep the sand coming out with the oil.

It also is stated that when one contemplates installing equipment to obtain the critical pumping speed, he should consider carefully all the factors and conditions effecting his lease before beginning tests, but once started, to continue over a sufficient period to thoroughly demonstrate the advantages or disadvantages of the method. Conditions applicable to the field in Torrance may not be applicable to other fields because of power rates, surface equipment, sand and water conditions and a host of variables entering into the production of oil.

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Compressed Air *Used Satisfactorily In California* For Drilling Power

BRAD MILLS
Associate Editor

COMPRESSED air is being used for drilling power in the Elwood, California, field by Barnsdall Oil Company, and has functioned satisfactorily after a number of difficulties were overcome. Use of air in the place of steam was occasioned by the desire to obtain service from a large battery of idle gas compressors.

Drilling conditions in the Elwood field are not considered so severe as in many deeper producing areas, and extremely high steam pressures had not been required. While the use of air was in the nature of an experiment, the surplus of equipment capable of supplying such power was the greater reason for its adoption. The questions of expense and efficiency were not considered to such an extent as they would have been, had it been necessary to purchase compressors primarily for the purpose of supplying a satisfactory power in place of steam.

Ordinary steam equipment is being used on the drilling rig. Theoretically, air may be used to drive steam equipment, but under many conditions and contingencies it is not practical to make the change without considering a number of factors. Barnsdall Oil Company has added much to its knowledge of air as a prime mover during the drilling of two wells under varying climatic conditions.

A battery of 24 large gas compressors was available for use in furnishing compressed air for drilling operations. The company was well equipped with steam drilling engines and slush pumps, and the change from steam to air did not offer unusual difficulties. Use of air in steam equipment was not strictly an innovation, but little information was available to indicate its value for drilling purposes.

All factors being equal, air is thought by some engineers to be from 20 to 30 percent more efficient than steam. Even if this is true, steam may not require as much attention as air during severe weather. Air is a little more positive in action, and perhaps is quicker to start and stop than steam, but it also has its disadvantages.

Nine of the 24 gas compressors that had been used for gas-lift purposes were blocked off and converted into air compressors. The compressors are normally rated at 185 horsepower each and give three stages of compression. The 18 x 20 cylinders deliver air or gas at 24 pounds, the 11½ x 20 cylinders at 95 pounds, and the 6½ x 20 cylinders at 175 pounds.

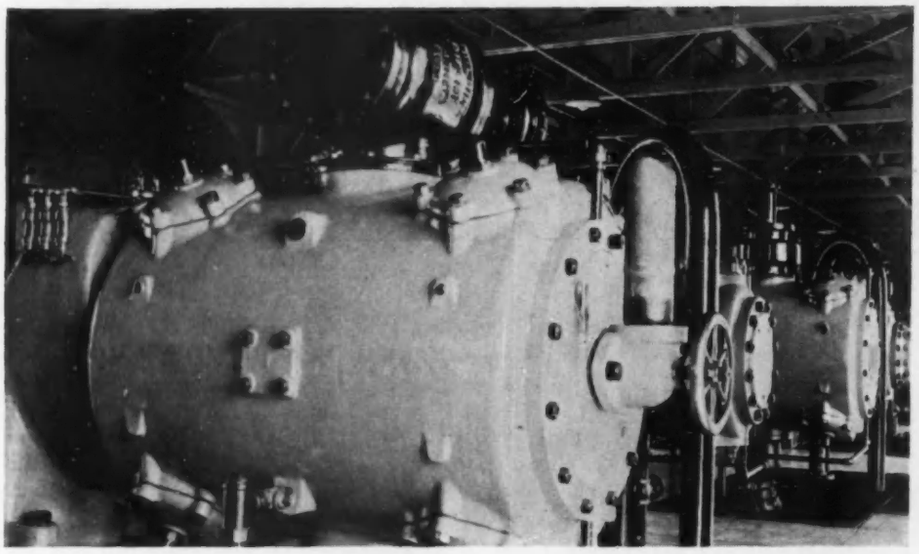
Special intake valves were purchased and installed on the suction side of the primary stage. The header was disconnected from the gasoline absorption plant and the nine compressors made a separate unit. Through a new manifolding arrangement, possibility of gas contamination was eliminated. The arrangement was such that any one, combination, or all of the compressors could be used as needed.

Special regulators were fitted onto the compressors so that air may be admitted to the cylinders as it is needed to maintain the line pressure to the drilling well. These valves automatically control the air compressed on the intake, by remote control from the high side. Each engine is connected and set so that it falls in line in sequence as the load increases, but cuts out as the load falls off. With this arrangement one engine may supply enough air during very low consumption periods, while several compressors may fall in line during very heavy drilling operations. Air is delivered to the line at a pressure of 175 pounds.

It is desirable that the compressed air reach the pipe line to the drilling well at the highest possible temperature. It is necessary, however, to cool the air between compression stages. The temperature of the compressed air delivered to

Air heater in line ahead of engine and pump.

The heated air is used in drilling operations.



Remote controlled special regulator governs compressor air intake.

the line depends to some extent upon the rate of consumption. Rapid compression of a large volume of air will give a higher temperature than a very low volume.

Temperature of the air delivered to the line may be above 200 degrees Fahrenheit, but it cools fast. To overcome some of the difficulties encountered because of the low temperature of the compressed air, the company has designed and manufactured an air heater. It consists principally of a section of a steel caisson normally used in pier construction, and a large number of one-inch pipe tubes. The air passes through the heater and the temperature is raised by the gas fire in boiler fashion. The caisson section is about 30 inches in diameter and 20 feet long. Small air pipes have been placed in the stacks to increase the draft.

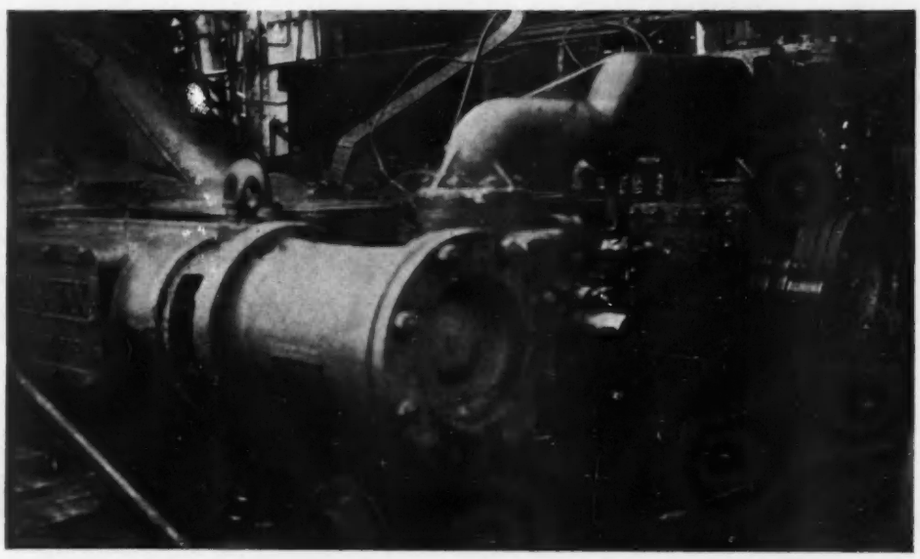
The heater raises the temperature of the air to a point that permits full use of the drilling engine and mud pumps without difficulty. During early operations the mud pump gave some trouble when operated rapidly with unheated air. It is not necessary to heat the air to a very high temperature for average operations. The heater is placed as near the drilling well as possible.

The compressed air goes to the drilling well through a 12-, 10-, eight- and six-inch line. The line is made of an old gas gathering line. The compressor plant is located a considerable distance from drilling operations, causing the large pipe line to act as a reservoir. Original use of a smaller line was not so satisfactory, since it was possible for the drilling engine and mud pump to reduce the line pressure before the compressors could build it up.

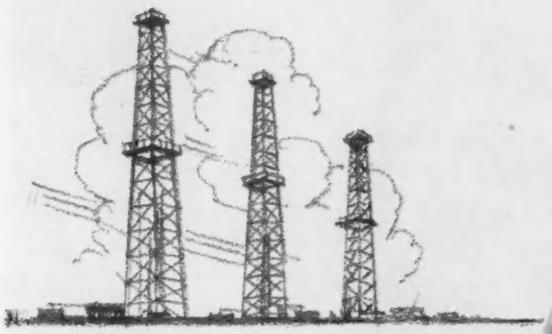
An ordinary 12 x 12 twin steam type drilling engine is being used, and a conventional 16-inch steam mud pump has been converted without trouble. The controls have not been radically changed to handle the compressed air.

Lubrication was a problem, however, and it was not practical to use cylinder oil. Ice machine oil has been employed successfully in the drilling engine. The air temperature is much less constant in the engine and mud pump than steam would be under similar use.

Air consumption depends upon the nature of operations at the drilling well. The highest consumption for 24 hours has been less than 4,800,000 cubic feet. No attempt has been made to compare the cost of compressed air with that of steam. Where compressor equipment is idle, as was the case at Elwood, it may be practical to use air instead of steam. Where it is necessary to purchase and assemble new equipment, or where steam equipment is quickly available, steam seems to offer many advantages over air for ordinary drilling operations, the company has found.



An ordinary 12x12 twin steam engine is used for drilling.



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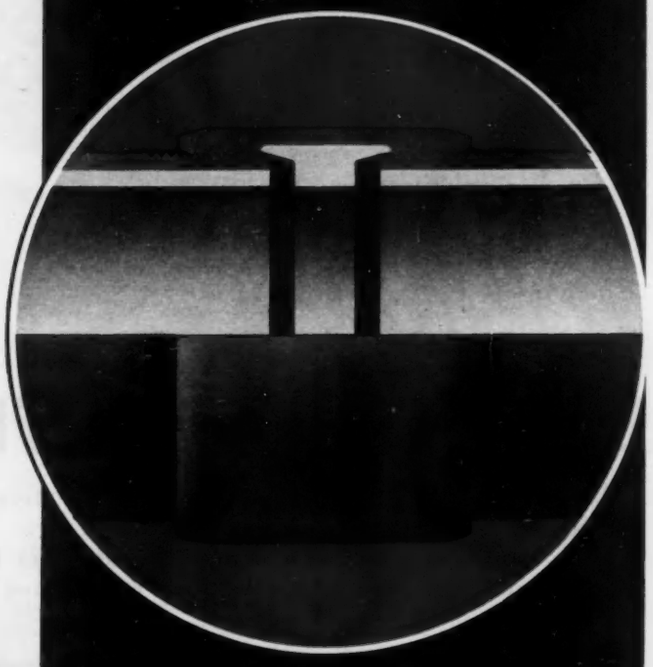

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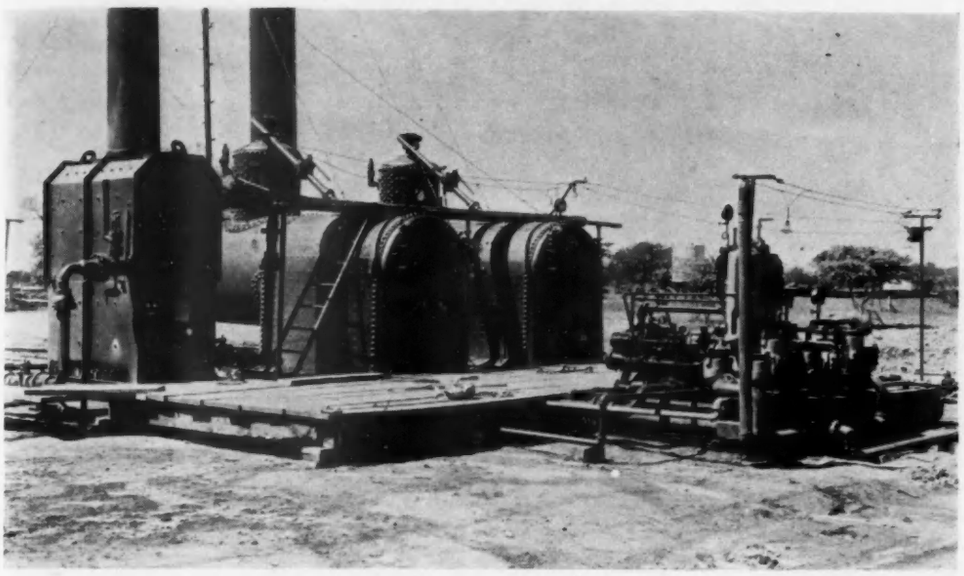


The power plant used on the rig. It consists of two 125-horsepower boilers and a separately fired superheater. To the right are the feed water pumps to which is attached a feed water heater.

Many Hook-Up Innovations *Are Installed on* Gulf Coast Rig

CHARLES LEYENDECKER
Staff Representative

SEVERAL innovations in modern rig design and hook-up are included on one of the most modernly equipped rigs now drilling in the Gulf Coast. It is located at Pierce Junction, Harris County, Texas, on Gulf Production Company's Taylor 39. Included among the many interesting features are the application of stationary power plant principles to an oil field rig power plant, the design and installation of a centralized rig greasing system, abundant use of specially designed steel skid foundations for machinery, and the adaptation of simplified piping connections.

Steam Plant

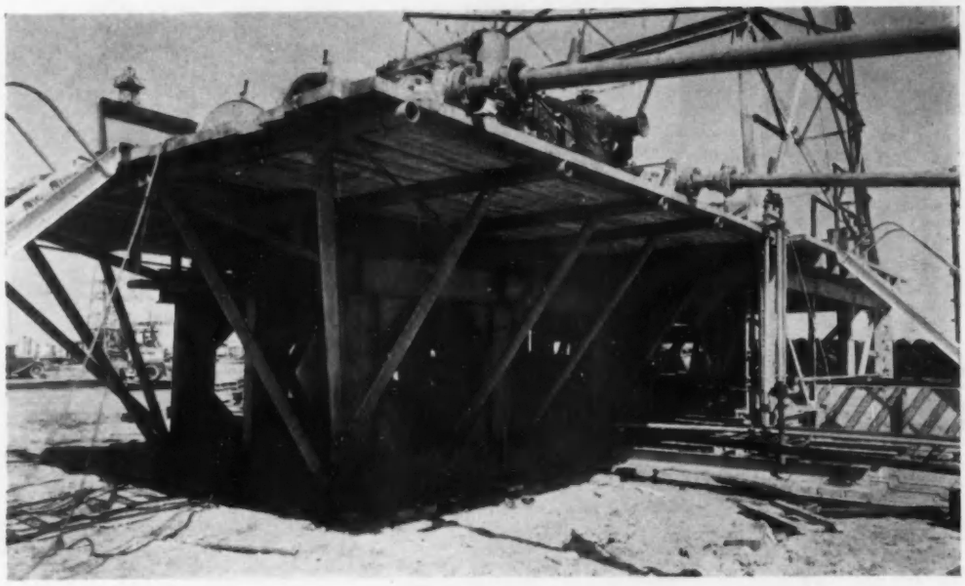
The steam plant at this rig was assembled with the idea of applying principles long used in large stationary plants to oil field rigs. For years, stationary plants have used open type feed-water heaters and superheated steam and long ago adopted the steam turbine or cut-off controlled prime movers. This efficient drilling rig power plant only needs insulating materials, economizers or evaporators to equal the best stationary practice. The reason these devices have not been supplied is that ample boiler capacity is present and fuel and water is practically free.

There has been installed two 125-horsepower, 350-pound, dry-bottom, large, fire-box boilers with large "ducks' nest" using gas for fuel. In conjunction with these boilers, a separately fired superheater has been installed.

The pressure on the boilers is controlled by means of a "nigger boy" boiler pressure governor and the degree of superheat is controlled by pilot operated temperature controls. Since installation of this superheater, trouble was experienced from the temperature running too high in the superheater when the rig was shut down after being run wide open. Consequently, an auxiliary reverse acting diaphragm motor valve was connected to the bleeder in such a way that when the temperatures of the steam exceed the desired controlled temperature by 10°F., this valve opens, bleeding steam through the superheater and delivering this steam to a steam blower in the superheater stack; further cooling the superheater by induced draft. This device has prevented the temperature in the superheater exceeding the desired controlled temperature by more than 50°F. It is quite possible to limit this temperature to closer limits if desired, though 50°F. is adequate. Such a device will prevent damage to controllers and superheater elements.[1]

Another power plant auxiliary recently perfected by a major supply company is installed on this rig, namely, an open-type feed-water heater mounted on a cold and hot water pump and assembled as one unit. This unit is mounted on skids beside a 7x4½x10 boiler feed pump and two 4-kilowatt turbo generators. This heater is effective in removing temporary hardness from the boilers and saves approximately one percent of fuel for each 10°F., of feed water temperature, as well as materially reducing the amount of raw water that is fed the boilers. Part of the exhaust steam from the slush pumps

[1]M. L. Cashion, division drilling engineer, Gulf Production Company.



This portable steel foundation can be skidded with ease from location to location. A vertical engine is mounted on it. Also shown are some of the piping connections and a portion of the steel stairway.

and all the steam from the feed pumps is returned to this heater where the steam is condensed and fed to the boilers while heating the cold raw water.

Temperatures from 210 to 220°F., are obtained at all times, resulting in a considerable fuel saving or considerable increased steaming capacity, cleaner boilers, less boiler strains, as well as other intangible savings.

This power plant connects to two 15x7¾x20 slush pumps and a 12x12 vertical engine through a four-inch welded steam line. One of the pumps runs at 46 strokes per minute at 5000 feet with a four-inch drill stem and the other pump running 10 strokes per minute mixing mud. It is possible to raise steam from 290 pounds to 350 pounds in five minutes even though the boilers are being fed simultaneously. This indicated more than ample boiler capacity.

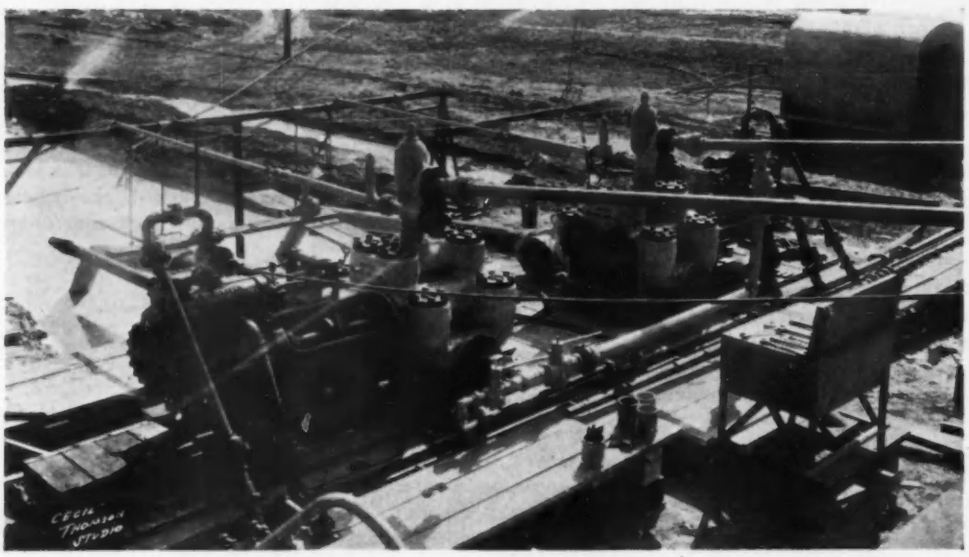
Steel Foundations

This rig is assembled with a 136-foot high, 30-foot base derrick and steel substructure setting on steel grillage of a simple and practical design developed by the company's engineers. A 27-inch make and brake rotary is used. Steel stairways of unit construction, steel mud ditches and steel pipe rack are used in the interest of safety.

A 42-inch six-sheave inline crown block and five-sheave traveling block with 1⅛-inch wire rope grooves are used in conjunction with a 300-ton hook and weldless elevator links.

The 20-inch slush pumps are set on steel skid platforms that bolt together in the center. Made into the side of these skidds are a series of channel irons that hinge out onto which boards may be placed to form a three-foot platform surrounding the pumps. These channel irons fold up when the pumps are being moved, resulting in a narrow skid.

A vertical engine is set on a portable steel foundation from which the steel portable building and floor also is supported by a simple and rugged device. It is contemplated that this engine and engine foundation, floor and building may be skidded from one location to another



These two 15x7¾x20 slush pumps are mounted on portable foundations. The piping is as simple and straight as possible to connect.

THE USE OF EXPLOSIVES IN PROSPECTING FOR OIL

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CONTROLLED Timing is the essential factor in securing reliable data in Geophysical Prospecting with explosives.

Accurate control of the firing of Atlas Electric Blasting Caps is provided by the design of the so-called match head priming device. The bridge wire, uniformly stretched and soldered between two metal plates, is completely embedded in a sensitive firing compound which is rigidly held adjacent to the all-pressed detonating charge in the Electric Blasting Cap. The design permits testing before, during and after assembly.

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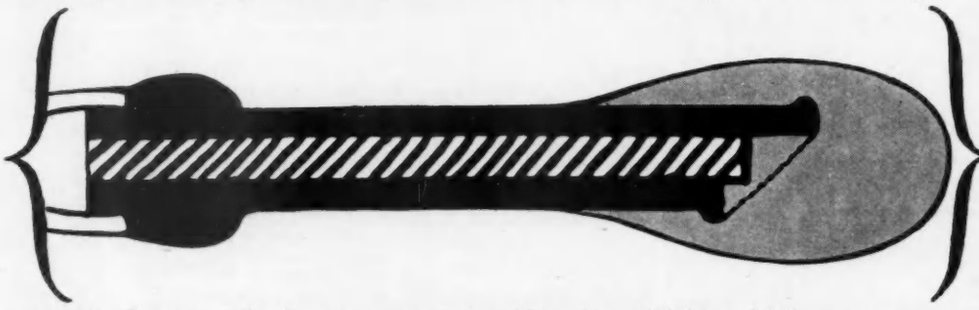

compound assures both accuracy and uniformity of firing which are so essential to dependable results in Geophysical Prospecting with explosives.

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ATLAS

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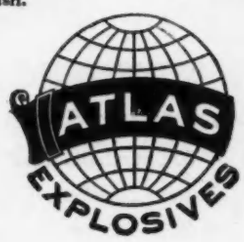

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intact and as a unit. A four-speed shaft, roller-bearing, heavy type drawworks of late design is bolted to this engine foundation and to the derrick floor, providing a very rigid structure free from excessive vibration.

The manifolds for furnishing water to the hydromatic brake and to the water-cooled brakes have been built into this unitized frame in such a way that they move with the drawworks and it is necessary only to break or connect four flanges to completely connect up these units.

Another innovation of this modern rig is the setting of the hydromatic brake tank on a steel skid and the setting of this on skids on the ground instead of on the usual elevated platform. A long flume is used to bring the top of the flume to its correct height. This system has been found to work satisfactory.

Lubrication System

A greasing system has been arranged for the lubrication of inaccessible parts of the drawworks by means of a centralized greasing system, making it unnecessary to remove the guards when the rig is being oiled. This assures more regular greasing.

Another interesting attachment to this drawworks is a 10-feed force feed lubricator mounted integral with drawworks for chain lubrication. Copper tubing is run in such a way that it is not necessary to disconnect any tubing while the rig is being moved, at the same time insuring adequate lubrication to the chain while the rig is being run.

The crown block is greased by a unique system on the derrick floor by means of the same centralized greasing system as used to grease the drawworks, as well as the remainder of the rig. This is the first time that this system has been used to grease a crown block in the United States.

Piping Layout

This rig has been hooked up with the idea of eliminating unnecessary ells and bends as well as screwed connections and stiff connections. The idea has been throughout to simplify piping in every way.

There are no stiff connections on the pumps in spite of the fact that every connection necessary in drilling operations is provided on this standard manifold. The complete piping layout is disassembled in pieces that are easily handled by breaking 40 unions. There are no half swings on the rig, yet complete flexibility is obtained by the use of flexible ball joints. Plug valves are used throughout on this rig except on engine and pump throttles.

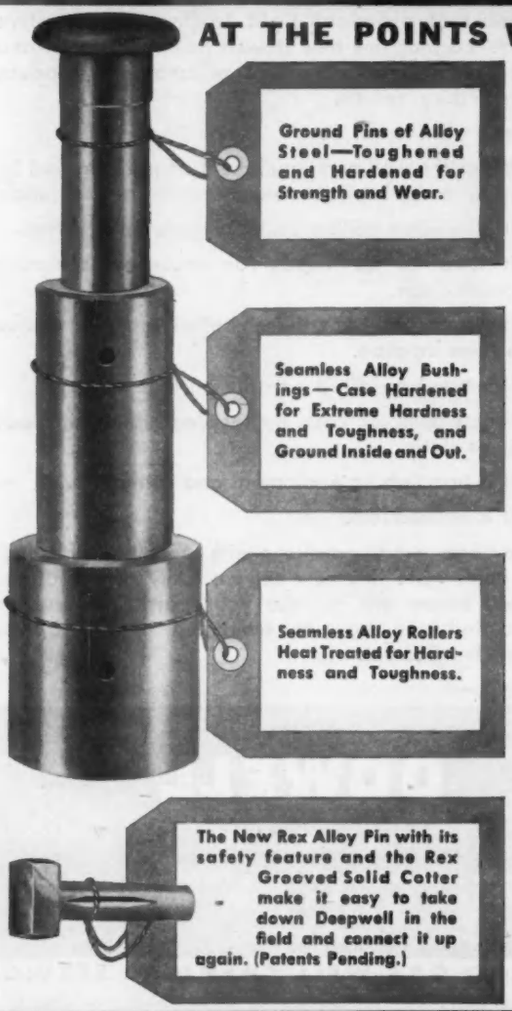
A unique dead end clamp is used on this rig, which is made by using a cable tool drilling clamp fastened through a four-foot bail to a double clamp bolted at the bottom of the leg of the derrick. This wire line clamp obviates the necessity of the use of various make shift dead ends that have been used for some time and provides a safe, fast clamp for use on rotary rigs. The excess line is merely used through this clamp and left on a reel set on the ground.

There are several devices too numerous to mention that are used in the setup of this rig, which are used at the convenience of the men and for their safety.

This rig has attracted much attention among the drilling engineers along the Texas Gulf Coast and others interested in new drilling equipment and has been visited by several thousand men.

MAKE THE BEST USE OF THAT SPROCKET SPACE

AT THE POINTS WHERE THE LIFE OF ALL CHAIN CENTERS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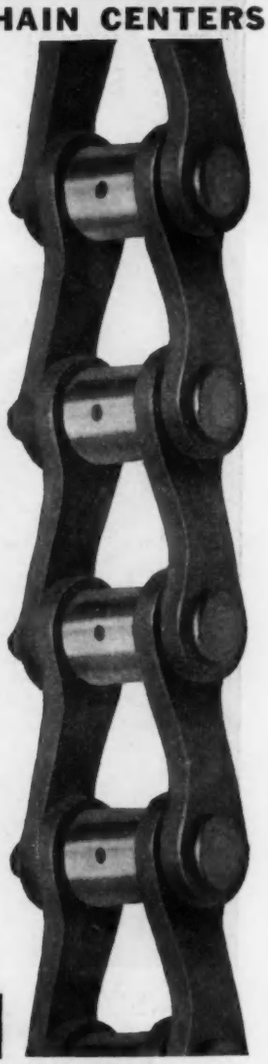

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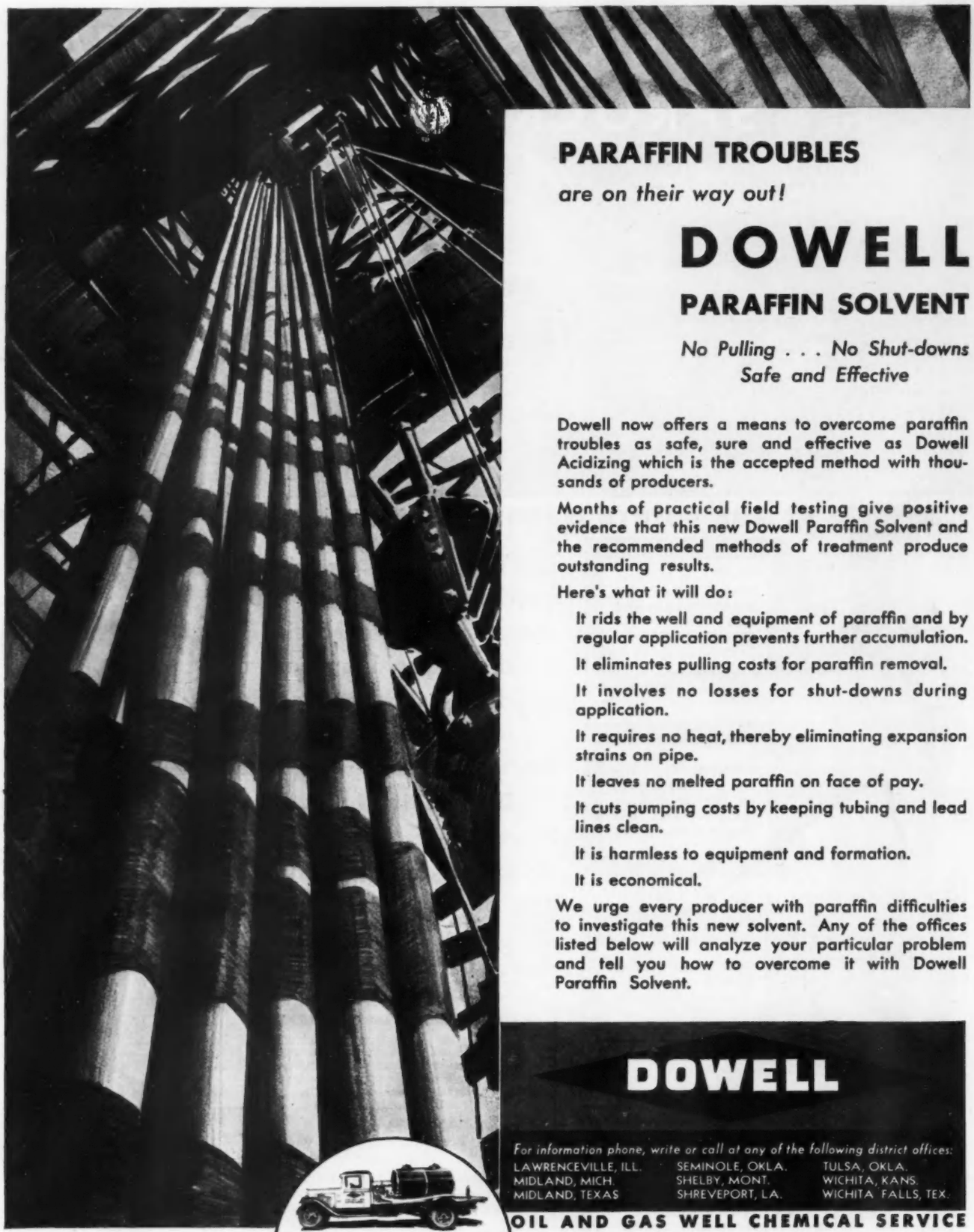

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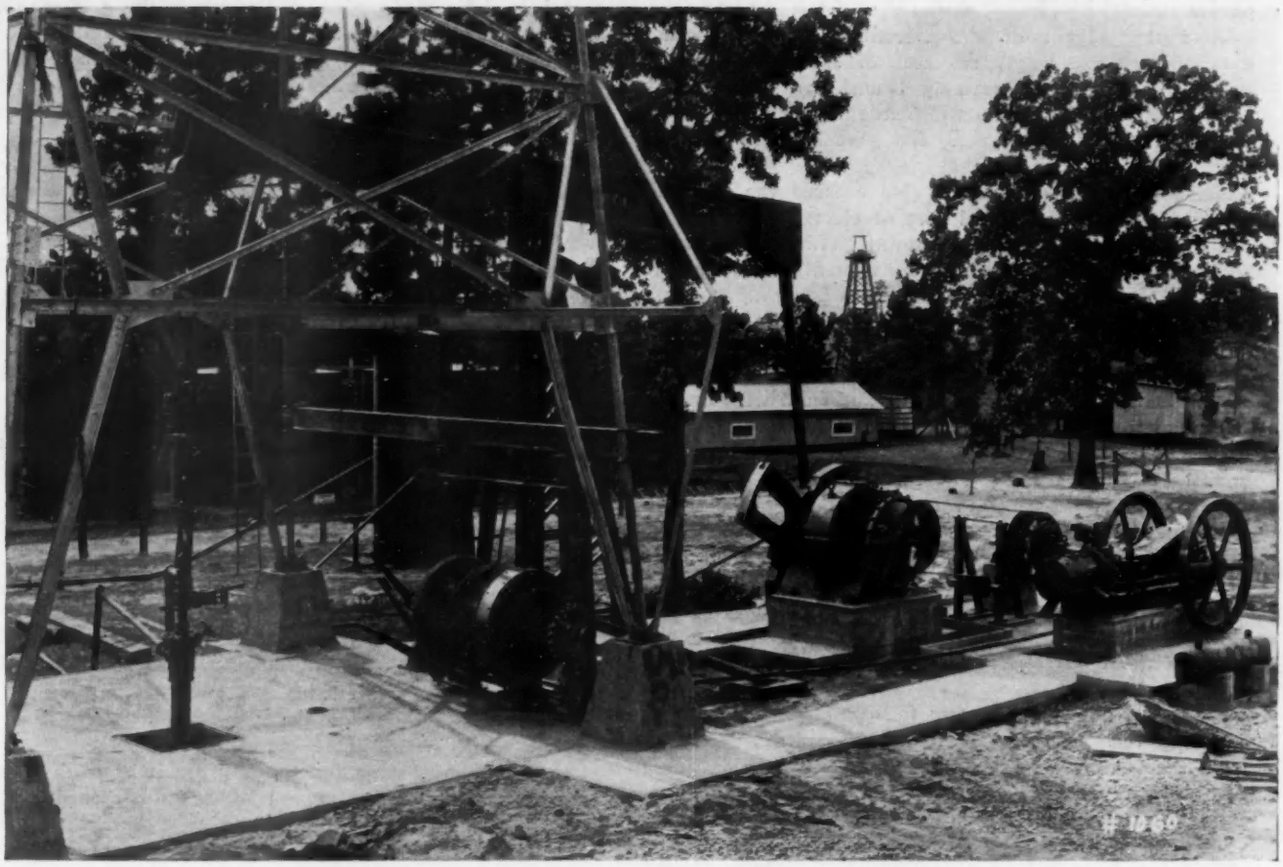

An East Texas single reduction gear pumping unit with V-belt drive from the prime mover to the pinion shaft of the unit

Geared Pumping Units *for Reciprocating* Well Pumps

L. A. LITTLE
Engineer, Lufkin Foundry & Machine Company

IN order to understand the duty which the mechanical unit has to perform, it is necessary to be familiar with the types of prime movers generally accepted by oil producers. The two main classes of prime movers used in the production of oil are: internal combustion engines and electric motors.

Internal combustion engines are divided into the following classes: Single-cylinder gas engines or twin-cylinder gas engines of slow speed (180 to 300 revolutions per minute) type; multi-cylinder gas engines of the high speed (600 to 1200 revolutions per minute) automotive type, oil engines and Diesel engines. There also is a tendency to design multi-cylinder vertical type engines with large rugged parts to operate at moderate speeds of less than 600 revolutions per minute.

Electric motors as used in the production of oil operate at speeds of from 600 to 1800 revolutions per minute with several different characteristics attached to the motor to accommodate pumping, pumping and pulling, or variable horse power motors to accommodate changing well conditions.

Most pumping wells are operated between the speeds of 10 to 30 strokes per minute, the average being 20 strokes per minute. There are, however, wells pumping

NATURAL flow, gas lift and reciprocating well pumps are the three principle methods by which oil is raised from its subterranean reservoir to the surface of the earth. In the accompanying paper, which has been somewhat abstracted, is discussed one of the more recent developments in the pumping of oil from wells. The thoughts expressed are solely those of the author and do not necessarily represent statements of THE OIL WEEKLY.

The paper was presented before the East Texas Chapter of the American Petroleum Institute Division of Production at Kilgore, Texas, on April 30, 1935.

as slow as one stroke per minute, and as fast as 40 strokes per minute.

With the advent of the electric motors, it became necessary to use larger reducers of speed, between the prime mover and the walking beam than could be obtained with the old standard belted rig. This created a demand for reduction gears, and gave birth to the modern geared pumping unit.

At this point a new factor also entered the field—the power bill. With the actual cost of electricity staring the operator in the face every month, efficient operations spelled direct financial gains. Consequently, the operator turned to geared reduction units, and savings on the power bill were appreciable.

Entwined with these savings is the counterbalance and the flywheel. Without counterbalance it was necessary to do all the work of lifting the rods and fluid with one-half the crank revolution; whereas, the rods returning in the hole set up a regenerative action in the prime mover. The counterbalanced crank distributes the work more uniformly over the up and down stroke of the cycle. On the top stroke of the rods, the counterweight helps the prime mover lift the fluid and the rods, and on the down stroke of the rods, the rods help the prime mover lift the counterbalance to a position of mechanical advantage.

The counterbalance tends to distribute the load equally between the up stroke and the down stroke of the rods, but this does not give us the absolutely smooth power output condition. In changing from rotary motion of the crank to reciprocating motion of the polish rod, we go from zero velocity to the maximum velocity and back to zero velocity on each half of the stroke. To combat this condition a flywheel is desirable.

The use of the electric power helped to create accurate accounting methods which brought to the surface the fact that financial savings, through the use of the geared units, were greater due to fewer repair parts, less labor, and continuity of production, then too the lower power bills. Consequently, geared units have been adapted to slow speed gas engines with appreciable savings in lifting costs.

Oil producers demand simplicity of design and operation in production machinery. This necessitates the use of as few rugged parts as possible.

With this in mind a majority of the geared units of recent design in operation today, are single reduction gears with V-belt drives from a sheave on the prime mover to the sheave on the pinion shaft of the unit. The V-belts place a cushion in the mechanism which absorbs shocks and furnishes desired speed flexibility. Whereby the speeds may be changed at normal costs by changing sheaves. The use of a single reduction gear as second reduction with V-belt drive as a first reduction, makes it desirable to use a motor within the speed rating of from 600 to 900 revolutions per minute.

The average single reduction geared unit employs a gear ratio of about 10 to one. With this ratio of gears, when slower speed prime movers such as the single-cylinder gas engine are used, a V-belt ratio of approximately one to one is employed. This makes a desirable combination which cannot be used when double reduction geared units are placed in this class of service. The average double reduction geared unit has a ratio of 30 to one which necessitates increasing the speed between the engine clutch shaft and the unit pinion shaft, by about three times and then stepping it back down in the unit.

The variables of oil well pumping is the difficult part of selecting the proper type of prime mover and pumping unit. If the operator knows the maximum amount of fluid he will ever have to lift from the well, and the fluid level at which this fluid must be lifted from, it is an easy matter to specify pumping equipment that will give long uninterrupted service. It is well to remember that the oil industry has wasted more money trying to get by with light equipment than ever has been spent on equipment with greater capacity than was needed. Therefore, always use pumping units with ample capacity to handle your maximum demands.

One thing is certain, the polish rod stroke must be regulated so as to produce the oil under the most economical conditions possible. This may require slow-speed pumping or intermittent pumping. The category of slow-speed pumping are speeds of 14 strokes per minute and less.

Slow-speed pumping may be desirable during proration. But what does slow-speed pumping accomplish? For a five horsepower load at five revolutions per minute the same geared unit and counterbalance is required as for a 20 horse-power load at 20 revolutions per minute. The only variation is the size of the motor and the reduction from the prime mover to the polish rod. Slow speed necessitates the use of an extra pair of gears, and an extra set of bearings. As the ratio of reduction increases, the efficiency of the reduction decreases slowly. For the difference in cost of the five-horsepower motor and a 20-horsepower motor, a set of gears are eliminated, and the well is pumped six hours per day instead of 24 hours per day. In most cases the electrical demand is metered by 15-minute demand meter and four wells pumping alternately six hours each at 20 strokes per minute with a 20-horsepower motor have the same demand as four wells pumping 24 hours per day each at five strokes per minute with a five-horsepower motor.

This intermittent method of pumping is more desirable

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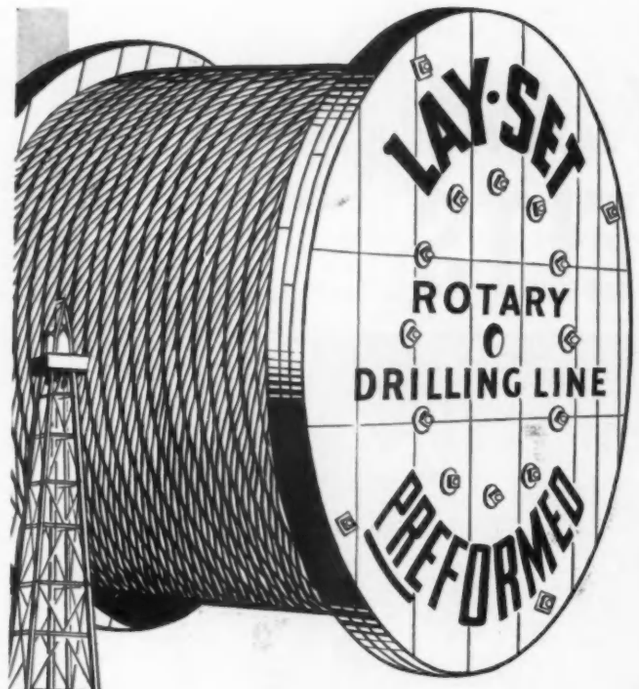

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than slow-speed pumping as it is more flexible. If the production is to be increased or decreased the period which the well pumps is re-arranged accordingly, with no changes of motor sheave, motor or loss of production.

There are cases however, where due to the demand basis on which the power contract is arranged, or due to the necessity to maintain even withdrawal it is necessary to go to double reduction gears.

Where well service and cleanout work is to be performed by auxiliary portable equipment, the floor or self contained type of pumping unit is gaining in popularity. This type of geared unit is usually equipped with twin cranks mounted on a structural frame which also supports the samson post, the entire compact unit setting on a slab in the derrick floor. One of the primary advantages of this type of pumping equipment is the facility, economy and simplicity of installation.

In the East Texas oil field with proration and the uncertainty of water encroachment, many operators desire to equip their wells with pumping equipment sufficiently large to handle any contingency. Installing large units to pump 40 barrels of oil per day is out of proportion, consequently, many large pumping units are being equipped with a back crank. To which pull rod connections may be attached and additional wells pumped by jacks.

Another advantage of one large pumping unit being utilized to pump two or three wells is that if every allowable is based on potential testing—it will be possible with one large unit to make good potential tests by using its longest strokes and speeding up the unit. This arrangement will be especially advantageous if key wells are used for arriving at the potential.

This is a very flexible arrangement, for during the light pumping period the unit investment may be spread over several wells, and when the heavy pumping period arrives, the less expensive jack installation is replaced by large pumping units.

Portable equipment is very popular at the present time, but individual well pumping equipment is more desirable in some instances. Individual pulling equipment, used in conjunction with pumping units are chain driven hoists, with loose drums, which permit the power to flow in one direction continuously eliminating reversing and stopping of the prime mover. All the starting and stopping operations are performed by a friction clutch and brake which are a part of the hoisting mechanism.

The central pumping power is another method of lifting oil. The power has gone through the same process of development as individual units. The speed reduction of the modern power is obtained with totally enclosed gears operating in a bath of oil. They use the same class of prime movers as do individual pumping units. The largest powers on the market today have a capacity of about 150 horsepower at 20 strokes per minute.

The use of central pumping powers is limited by well spacing and surface equipment, which will not permit the pumping of large volumes of fluid. Surface equipment, such as pull rod carriers, hold downs, hold-ups, swings and jacks are still somewhat crude, but are going through a process of improvement at the present time.

Since the discovery of oil, a reciprocating plunger working in a barrel actuated by a mechanical speed reducer and transmission, has been a principle method by which the bulk of the world's oil has been raised to the surface, although new devices and methods are being tried continually, the old basic design promises to continue, with certain mechanical improvements and perfection.

FOREIGN DEVELOPMENTS AND TECHNOLOGY

Trinidad Oil Industry *Advances Both* Technically *and* Statistically

VICTOR BRYAN

Trinidad Leaseholds, Ltd., Point-a-Pierre, Trinidad, B.W.I.

BEFORE proceeding to a discussion of operations during 1934, it may be well to give a brief general resume of the history of the petroleum industry in the island of Trinidad.

The official history of petroleum in the island dates back to the year 1867, when one shallow well was drilled, but it was not until 1902 that the industry began to expand steadily. In that year, three more wells were started and a total of 2279 feet was drilled by all companies then operating in the island.

Footage drilled during any one year reached a peak in 1930 at 372,656 feet.

The total number of wells drilled from the birth of the industry to the end of 1934 is 2106.

Total footage drilled in 1934 was 351,783, as against 235,702 feet in 1933.

To the end of 1934, the deepest well in the island has been drilled by Trinidad Leaseholds, Ltd., in the Fyzabad field and was completed at a depth of 6400 feet as a commercial producer. This well, however, was plugged back to 5300 feet.

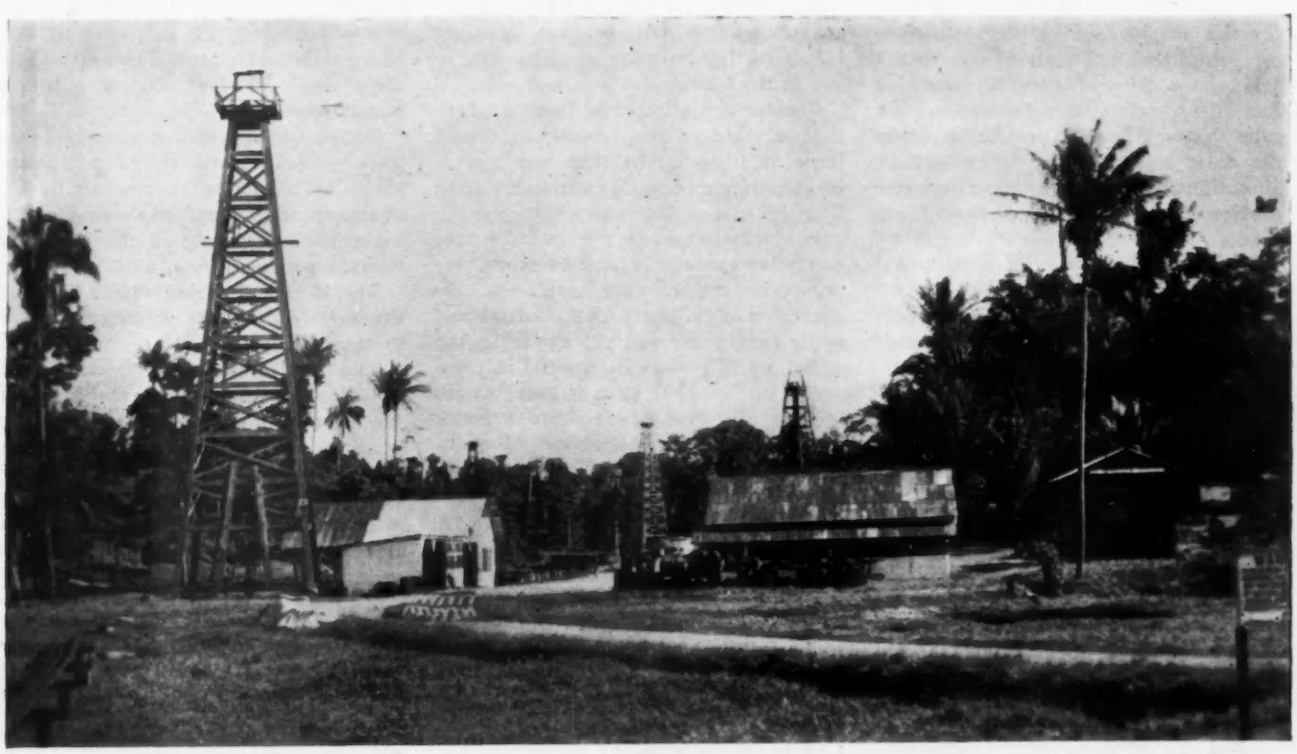
Trinidad now is the largest producer of petroleum in the British Empire and ranks eleventh among the petroleum producing countries of the world, coming before British India, British Borneo and Poland.

Besides the oilfields, there is a "Pitch Lake" of considerable size which is being exploited by Trinidad Lake Asphalt Operating Company, which organization has carried the asphalt of Trinidad to distant corners of the earth.

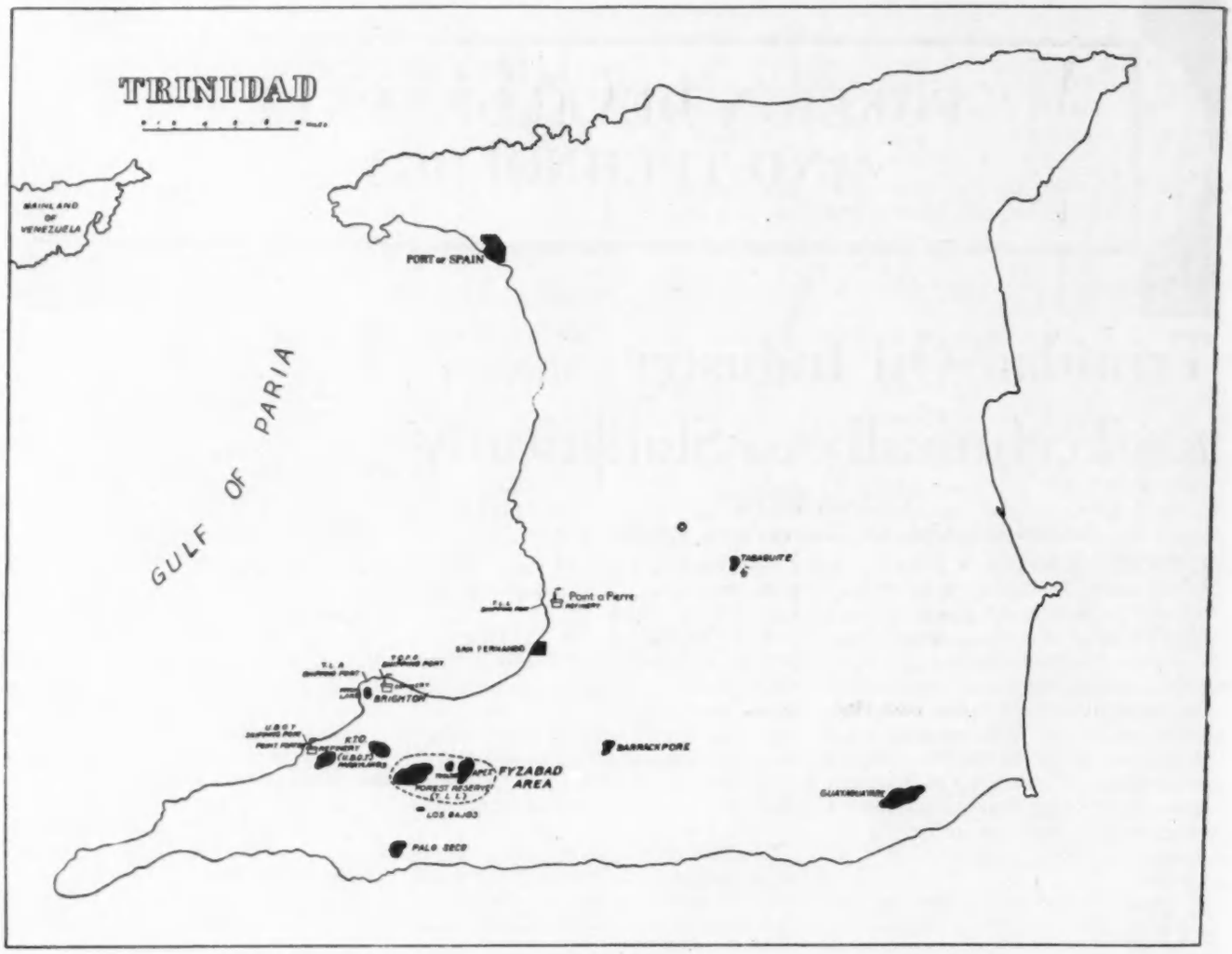
The year 1934 has witnessed considerable evidences of improvement in operating technique and general practice in the production branch of the industry. Many new problems in production engineering have appeared and marked advances have been made in every branch of this department.

Within the last two years, local operators in general have inclined more and more to real scientific methods of oil production, and the benefit of research in laboratory and field to the efficient production of oil has been clearly demonstrated.

The search for additional petroleum reserves continues over the island un-



Field view of an old area of Trinidad



der the auspices of various operating companies and, although no new major fields have been discovered, there is data to indicate that some appreciable extensions of known prolific horizons yet exist unexploited. Intensive exploitation of the deeper Cruse horizons previously untouched is proceeding apace.

At the end of 1934 there were approximately 850 producing wells in the island. Of this number about 26 percent are flowing wells, over 50 percent pumping, 15 percent producing intermittently by swabbing, bailing or stopcocking, and the remainder on gas-lift.

In the matter of production technique, special note may be made of several developments.

The adoption of slower pumping speeds and longer strokes has been steadily finding favor with operators and has shown results in some fields in the lowering of maintenance and operating costs.

Gas-lift continues to fulfill its proper function as a link between flowing and pumping, and latest foreign developments and results under this head are always regarded with interest. Various forms of intermittent gas-lifts are in use in the island.

Greater attention has been paid to the question of gas conservation and there is little doubt that less gas is produced per barrel of oil today than was the case a few years ago.

In furtherance of the general tendency towards gas conservation, repressuring experiments have been conducted in some parts of the island and while results are not yet available, the returning of gas to the ground at pressures up to 1700 pounds per square inch is a matter of common practice in one field with the object of maintaining the reservoir pressure as far as possible.

As in most other countries, the returning of gas to the ground for the purpose of maintaining the reservoir pressure is not yet out of the experimental stage, but Trinidad can be said to be fully advanced in this sphere of operations.

Although the structures in the island are very broken there has been a general tendency towards wider spacing. Three hundred feet between wells being common in the past, this is now being increasead to 500, 600 and in some cases 800 feet according to circumstances.

Bottom-hole pressure measurements have passed from the experimental stage to a matter of routine in one company, and quarterly surveys are undertaken regularly of the more important producing wells.

The electrical coring device has been finding steady favor among operators in the island.

The Institution of Petroleum Technologists maintain a branch functioning actively in the island, and this body continues to provide the main impetus for diligent pursuit of the scientific side of the industry.

The following table gives a comparative statement of the oil produced year by year since 1925:

Year	Barrels	Year	Barrels
1925..	4,386,507	1930..	9,418,907
1926..	4,971,471	1931..	9,743,502
1927..	5,380,464	1932..	10,126,065
1928..	7,684,450	1933..	9,561,354
1929..	8,715,652	1934..	10,894,363

(*Continued on page 50*)

All Markets Continue to Show Pronounced Strength

ALTHOUGH the two-months' upward movement of gasoline tank car prices in the Mid-Continent was arrested last week, there are some indications that the rising trend will again be resumed. For the favorable basic conditions that have brought the higher prices still prevail; and they are now being augmented by the spring expansion of agricultural demand, which has been delayed by unseasonable weather.

Close balancing of supply of crude oil with demand has continued, and hot oil output in East Texas has continued at levels that have not led to any noteworthy market instability. Even in Texas, within which the hot material is being confined largely, the markets are relatively strong.

While tank car prices on gasoline remained last week at the same levels as in the previous week, they represented the highest quotations since the early days of the oil code, in the fall of 1933.

The gasoline retail markets have continued to improve throughout the region east of the Rockies. In the Mid-Continent the Standard Oil Company (Indiana) boosted gasoline retail prices 3/10 cent a gallon. Standard Oil Company of New Jersey increased its retail postings to normal in certain districts in New Jersey where price wars had been in effect. Socony-Vacuum Oil Company, effective May 1, further advanced its retail postings in the New York area, making the fourth consecutive mark-up within four weeks, the total rise amounting to 2.3 cents a gallon. The Socony-Vacuum company on April 26 had posted an advance of about two cents a gallon at subnormal points in New England.

Prior to the recent series of increases in the New York area, prices had been somewhat below what was considered normal. The May 1 increase of 8/10 cent a gallon brought the Greater New York prices to a level about one cent higher than a year ago. In both New York and New Jersey the prices are now around or slightly in excess of 12½ cents a gallon, exclusive of taxes, which total four cents a gallon in New Jersey and five cents in New York.

Standard Oil Company of Ohio recently has made two separate statewide increases of one-quarter cent a gallon on all three grades of gasoline, on both tank wagon and service station schedules.

In the early part of last week oil stocks in London were showing strength, on reports that there was impending an advance in gasoline prices in the United Kingdom, where no market improvement has occurred for considerable time.

Crude Market Strong

Along with the rising retail prices throughout the country, and the strong tank car market, there has come further evidence of a strong crude oil market in the Mid-Continent. Purchasers have continued active in seeking connections to wells in various areas, and producers apparently have grounds for hope that higher crude postings may be in store.

Although wholesale kerosene prices improved last week, gasoline tank car prices late in the week were the same as a week previously. With only a few exceptions, the Mid-Continent tank car prices have regularly advanced one-eighth cent a gallon each week since about March 1.

The prevailing prices in East Texas and North Texas the latter part of last week, in U. S. motor gasoline, were as follows: third grade, below 62 octane, 4⅜ cents a gallon; standard or middle grade, 62-67 octane, 4⅞ cents; and premium grade, 68-70 octane, 5⅛ cents. In the Group Three, Oklahoma, region, corresponding prices were one-eighth cent a gallon higher than in East and North Texas. Kerosene was going in East Texas at 3½ cents a gallon, in North Texas at 3⅝ cents, and in Group Three area at 3¾ cents.

Hot oil output in East Texas was indicated to have increased about 5000 barrels daily, having averaged last week probably between 25,000 and 30,000 barrels daily. The illegal production is finding markets chiefly through tank truck movements to points within the state, the hot gasoline being offered at prices substantially below those prevailing on legal material.

East Texas Tank Car Shipments

Week Ending April 28, 1935

PRODUCTS	No. Cars	Estimated Gallons
Gasoline	546	4,458,699
Fuel Oil	215	2,028,823
Casinghead Gasoline	135	1,188,762
Distillate	90	729,293
Kerosene	57	459,936
Gas Oil	23	185,842
Residuum	15	146,037
Naphtha	10	75,143
Total	1,091	9,272,535
Total Previous Week	1,037	8,797,878
Interstate	501	.....
Intrastate	321	.....
Coastwise	269	.....
Total	1,091	.....

Group 3 Territory Expects Improvement

DEMAND in the Group 3, Oklahoma territory, was not particularly good during the past week, but it seemed generally believed that an immediate improvement would develop. Unseasonable weather throughout the middle west has retarded agriclutural demand far beyond the season of normally increased consumption, and the movement in that direction in just beginning to develop.

From the northern Mid-Continent angle the East Texas situation was satisfactory, with but little material available from that area. Inter-refinery buying, which has braced the market for several weeks, was on the decline during the past week, but diminishing margins continued to make maximum contract buying attractive, and a pick up is expected.

Although reports indicate that a small amount of third grade U. S. motor fuel, 62 and below octane, could be picked up for 4⅜ cents early in the week, most jobbers were holding to the minimum of 4½ cents, and expecting an increase of at least another eighth-cent within the next 10 days. Standard Oil Company (Indiana) strengthened the situation, at least psychologically, with its 3/10 of a cent increase in retail price throughout its territory.

Kerosene was scarce under good demand and nothing was available in the 41-43 water white class for less than 3⅝ cents. Distillates were easy under

the influence of warmer weather. The 26-70 naturals were easy at 3¼ to 3½ cents but expected to gain strength through the passage of the Texas gas wastage law. This law is expected to cut off a large volume of natural which is being obtained from relatively lean gas.

There Is Less Price Cutting in California

THE market situation in California is marking time, with all but three refiners holding to the newly set tank wagon prices. A number of small service stations continue to retail gasoline in Southern California at 13.5 to 15 cents against a regular price of 16 cents for major company third grade.

The prevailing tank wagon price is 13 cents, while the cut price refiners are making deliveries at 11.5 cents up. The major companies allow a three-cent margin on third grade, but the margin is four cents on regular grades. All prices include the four-cent tax.

Cut price service stations have been notified by letter that members of the sales agency would not hereafter make any deliveries until regular prices are restored. This step came when one company threatened to reduce all grades two cents if the other refiners did not follow the agency rules to the letter. The notice served its purpose to a large extent.

The tanker strike is still in progress, but most of the vessels are moving with non-union crews. For a few days it was feared a general maritime strike would be ordered on the West Coast, in sympathy with striking tanker employes.

The market for fuel oil is slightly stronger, as the surplus held by some of the smaller plants was moved. The small plant owners display a tendency to ask more for their product, as they see an increased demand.

Houston.—Anderson & Kerr's A. Lueder 1, two and half miles southwest of Plantersville, B. Brantly Survey, A-103, Grimes County, was abandoned during the past week after testing salt water at 4242 feet. This well encountered the salt water sand from 4223 to 4242 feet. It topped the Hockley-ensis at 3216 feet, Dibollensis at 3899 feet and the Cockfield at 3990 feet.

Texas May State Allowable Is Raised

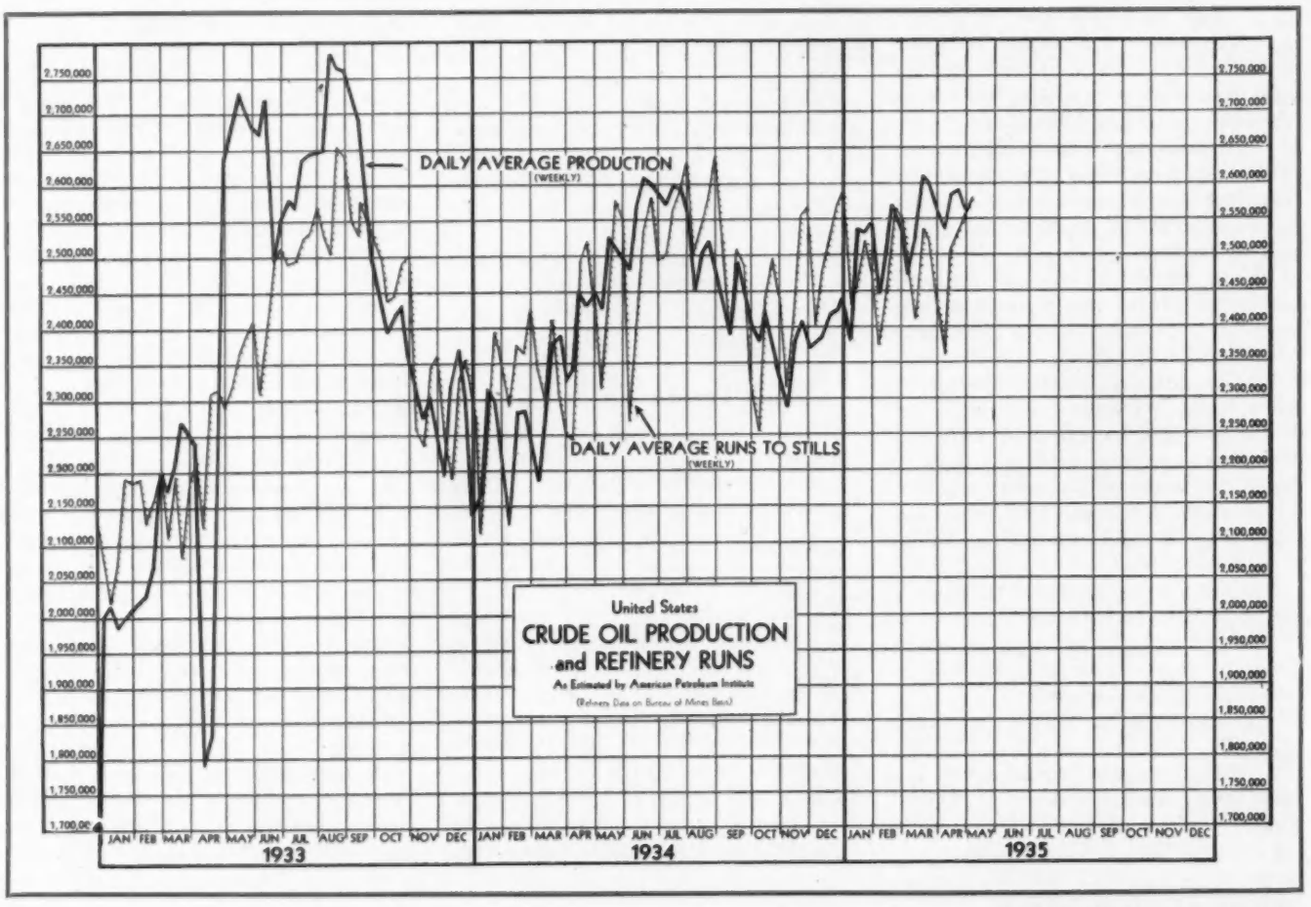
Austin, Texas.—The new proration order of the Texas Railroad Commission which became effective on May 1, provides for an allowable of 1,027,845 barrels per day, approximately.

While this total if 8491 barrels higher than the allowable fixed on April 1, it is 5015 barrels per day less than the allocation of 1,932,900 barrels recommended to Texas by the Department of the Interior as the probable consumer demand for Texas oil during the month.

Although commission engineers carefully inspected each field for reductions which could be made on the basis of physical waste, it was found necessary to order a cut of approximately 2.7 percent in the four largest flush fields of the state.

The allowable for the East Texas field as of May 1 was estimated at 444,444 barrels per day, based on 3.4 percent of the hourly potential, instead of 3.45 percent which was in effect during April.

Conroe was reduced 1189 barrels to 42,361 barrels; Van was reduced 1078 bar-



rels to 38,422 barrels; Yates was cut 1181 barrels to 42,069 barrels per day.

Five new fields appeared on this schedule for the first time. They were Schimmel-Bates, with an allowable of 61 barrels per day; Ray, allocated 300 barrels; Smith-Storey, allowed three barrels; Edwards, 17 barrels; and Richards, with an allotment of 75 barrels.

Because of the large number of new completions in several fields widely scattered throughout the state, the commission found it necessary to raise many of the allowables. A total of 64 fields received increased allocations, ranging from one to 932 barrels per day.

The largest increase, 932 barrels, was obtained by the new Bruni field, and resulted in a total allowable of 4317 barrels. The Furhman field, increased to 764 barrels, was granted a 431 barrel raise. Samfordyce, in Hidalgo County, was increased 684 barrels to 3420 barrels per day. Colletta Creek was given an increase of 345 barrels to 635 barrels per day. New Batson was raised 400 barrels to 880 barrels per day.

Offsetting these increases, to a large extent, were the cuts ordered in 69 fields. Besides the larger cuts in the flush fields already listed, Howard-Glasscock was reduced 478 barrels to 17,022 barrels per day. North Government Wells was cut 375 barrels to 11,261 barrels; Pierce Junction was cut 615 barrels to 2885 barrels; New Hull was reduced 582 barrels to 3048 barrels.

In working out the new order, the commission redistricted a part of the state. Six fields formerly in the West Texas district were transferred to the West Central Texas district. This accounts partially for the 20,105 barrel increase in West Central Texas. All but 2121 barrels of the increase was derived from the allowable of these six fields, the balance being distributed among new producers in the oil West Central Texas area.

The new allowable for the district is 51,105 barrels per day, and West Texas dropped 17,984 barrels as the result of the change. Fields transferred were: Big Lake, Irion, McCamey, Skelly-Grayson, Todd, and World.

In the accompanying table the new district allocations are compared to those in effect on April 1.

DISTRICT	April 1 Allowable	May 1 Allowable
East Texas	438,000	444,444
Panhandle	60,300	60,300
North Texas	59,400	59,400
West Central Texas	31,000	51,105
West Texas	146,133	127,967
East Central Texas	48,977	47,852
Southwest Texas	59,891	61,479
Gulf Coast	176,553	175,298
TOTALS	1,019,354	1,027,845

Sharp Drop in Oklahoma Brings Production Down

UNITED STATES crude oil production declined for the past week (ending May 4) to a level 67,850 barrels daily under the previous week's output, having averaged 2,492,600 barrels per day. The new production rate was 34,700 barrels per day below the allowable recommended by the federal government.

Oklahoma was almost entirely responsible for the sharp drop in production for last week. The state was following its customary practice of compensating at the month end for production above the allowable early in the month. Its output last week averaged only 458,575 barrels daily, or nearly 65,000 barrels a day less than in the previous week, when the average was 522,750 barrels daily. The Oklahoma allowable for April was 493,300 barrels daily. The Oklahoma City field accounted for nearly 50,000 barrels of the state's decline, having averaged 116,150 barrels daily, compared with 163,875 barrels per day the previous week. The Seminole area declined to 118,375 barrels from 131,200 barrels, a 13,000-barrel drop.

California, like Oklahoma, showed a decline and was under the state allocation, for similar reasons. The California average of 454,000 barrels daily last week was 6000 barrels below the

Oklahoma Allowables Range from 2½ Percent Up

Oklahoma City.—In an order issued Wednesday, May 1, the Oklahoma Corporation Commission set May allowables on the basis of percentages ranging from 2½ to 100 percent. Inclusion of the Little River pool in the group which will be allowed to produce to capacity during the month brought that group to a total of 14 pools. One new pool, the Wofford pool of the Seminole district, was added to Class D. In a meeting of operators of the Fitts pool with representatives of the proration department held in Ada during the week it was agreed that E. H. Moore et al, will be permitted to drill one more test to the McLish producing horizons for the purpose of testing the importance of production recently discovered below the main producing horizon of the pool. When these tests have been made it is understood that the well will be plugged back to Bromide. No disposition has been made of the Oklahoma City Wilcox sand underage. As of April 1, 1935, the corporation commission cancelled all underproduction from this zone and a battle is being waged by several operators to have such underage restored.

United States Crude Oil Production

Estimates Compiled by THE OIL WEEKLY

District or State	Barrels Daily for Week Ending May 4	Apr. 27
TEXAS—		
Texas Panhandle	61,500	65,200
North Texas	58,300	58,200
West Central Texas	23,400	23,500
West Texas	153,000	152,800
East Central Texas	49,100	49,800
*East Texas Field	445,800	444,300
South Texas	62,100	61,600
Texas Gulf Coast	179,500	177,600
*Total Texas	1,032,700	1,033,000
OKLAHOMA—		
Oklahoma City	116,150	163,875
Seminole Area	118,375	131,200
Tatums	5,000	5,000
Lucien	8,925	10,250
Fitts	14,075	13,575
Others	196,050	198,850
Total Oklahoma	458,575	522,750
KANSAS—		
Ritz-Canton	9,200	10,925
Voshell	4,550	4,625
Nikkel-Hollow	9,550	12,800
Sedgwick	8,450	8,625
Burrton-Haury	21,625	20,650
Others	91,350	88,375
Total Kansas	144,725	146,000
LOUISIANA—		
North Louisiana	22,500	22,200
Louisiana Gulf Coast	101,200	99,900
Total Louisiana	123,700	122,100
ARKANSAS	31,500	31,500
CALIFORNIA—		
Long Beach	56,000	60,000
Santa Fe Springs	37,000	34,500
Huntington Beach	35,000	36,500
Dominguez	19,500	19,000
Inglewood	9,500	9,500
Ventura Avenue	20,000	13,500
Seal Beach	7,000	7,000
Midway-Sunset	52,500	52,000
Elwood	11,000	9,500
Kettleman Hills	52,000	50,000
Mountain View	10,000	10,000
Playa del Rey	11,500	12,500
Others	133,000	146,000
Total California	454,000	460,000
MOUNTAIN STATES—		
Wyoming	34,500	36,600
Montana	10,500	10,700
Colorado	4,900	4,900
Total Rocky Mountain States	49,900	52,200
NEW MEXICO	50,600	49,900
EASTERN STATES	107,400	105,100
MICHIGAN	39,500	37,900
*Total United States	2,492,600	2,560,450
*Surreptitiously produced oil in East Texas, not included in above figures, estimated at	28,000	20,000
Grand total including surreptitious production	2,520,600	2,580,450

Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks and Cracked Gasoline Production, Week Ended April 27, 1935

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc.				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	582	582	100.0	465	79.9	6,968	10,285	17,253	785	235	8,971	496	471	95.0	77
Appalachian	150	140	93.3	100	71.4	1,255	883	2,138	304	120	727	69	69	100.0	21
Ind., Ill., Ky.	446	422	94.6	357	84.6	6,589	2,957	9,546	761	50	4,162	325	309	95.1	107
Okla., Kans., Mo.	461	386	83.7	262	67.9	3,529	2,153	5,682	709	395	4,027	256	238	93.0	66
Inland Texas	351	167	47.6	87	52.1	1,240	136	1,376	215	720	1,736	82	66	80.5	20
Texas Gulf	601	587	97.7	511	87.1	6,326	217	6,543	1,837	290	8,939	358	355	99.2	103
Louisiana Gulf	168	162	96.4	108	66.7	890	420	1,310	213	.....	3,104	71	71	100.0	15
North La.,—Ark.	92	77	83.7	45	58.4	197	76	273	29	180	313	41	38	92.7	8
Rocky Mountain	96	64	66.7	41	64.1	901	.....	901	111	50	770	46	42	91.3	12
California	848	822	96.9	453	55.1	8,852	1,223	10,075	942	2,760	64,038	209	209	100.0	47
TOTALS WEEK: April 27, 1935	3,795	3,409	89.8	2,429	71.3	36,747	18,350	55,097	5,906	4,800	96,787	1,953	1,868	95.6	476
April 20, 1935	3,795	3,409	89.8	2,386	70.0	37,405	18,460	55,865	5,751	4,695	97,246	1,953	1,868	95.6	479

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week Ended April 27, 1935 compared with April 1934 Bureau figures.

Estimate B. of M. Basis April 27, 1935	2,580		530
Estimate B. of M. Basis April 20, 1935	2,535		535
U. S. B. of M. April 1934: Daily Average Crude Runs	2,452	U. S. B. of M. April 1934: Daily Average Cracked Prod.	485

(a) Amount of Unfinished Gasoline contained in Naphtha Distillates.
(b) Estimated. Includes Unblended Natural Gasoline at refineries and plants; also Blended Motor Fuel at plants.

previous week's level, and approximately 40,000 barrels under the allowable.

Kansas production declined a little more than 1000 barrels, to 144,725 barrels daily, but not within the federal allocation of 141,000 barrels per day.

Louisiana output rose 1600 barrels, to 123,700 barrels daily, and was more than 12,000 barrels above the federal allocation to the state.

Texas production was 300 barrels a day lower, having averaged 1,032,700 barrels daily, or about 12,000 barrels more than the federal allocation.

Surreptitious production, mostly in East Texas, is not included in the above figures. Such output last week was indicated to have averaged between 25,000 and 30,000 barrels daily, a gain of 5000 barrels or so over the previous week's average.

Austin, Texas.—The prospect of the passage of any bills increasing the tax rate on oil or gas at the current session of the Texas Legislature became more remote last week when Speaker Coke Stevenson announced that he would lay out no more controversial bills at this session.

Gasoline Plant For Fitts Field

Tulsa.—J. E. Crosbie, Inc., Tulsa, has begun surveys of a site in NE 30-2-7e, in the Fitts field in Southern Pontotoc County, for a new gasoline plant. The location is on a Magnolia Petroleum Company lease. The plant will use both compression and absorption extraction systems. Part of the material will be moved from the company's plant in the Lovell field, Logan County.

Favorable Report on New Texas Oil Commission Bill

Austin, Texas.—The House Committee on Oil, Gas and Mining last week voted out with a favorable report the bill creating a new conservation commission to take over the control of oil and gas now administered by the Texas Railroad Commission. The measure was introduced by Representative Pat Dwyer of San Antonio.

Although the committee voted eight to three to pass the bill out, this was no indication of its true sentiment on the question. Dwyer has had the bill in the committee for six or eight weeks without making any effort to have it considered, but some ten days ago insisted upon a hearing.

Members of the committee expressed the opinion that by voting the bill out on the floor, the measure would be killed as effectively as though sent to a sub-committee, as some proposed. They feel sure that Dwyer will be unable to bring the bill up for consideration, although the San Antonio representative insisted that he could pass it.

Comparison of Permits Granted for New Wells

STATE—	Week Ending April 27	Total this Mo.	Total this Year	Total this Date Last Year	1934 Year Total
Arkansas.	1	7	51	15	100
California	27	77	285	155	629
Louisiana.	25	92	277	246	799
Kansas...	22	83	459	283	1,015
Michigan.	...	38	131	152	460
Oklahoma	50	220	752	691	2,045
Texas....	393	1,053	4,346	2,877	10,550
Totals..	518	1,570	6,301	4,419	15,598

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to May 3, 1935)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.03	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr	*.75			9-29-33
Crane, Upton, Howard and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	2¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia,	Below			
Humble, Rabbs Ridge	20— .82	2¢	34— 1.12	9-29-33
South and S.W. Texas	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	*.85			9-29-33
Saxet	*.85			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansas				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
El Dorado East Field and Smackover	*.70			9-29-33
North Louisiana	29— .79	2¢	40— 1.08	9-29-33
Urania	*.85-*.87			1- 1-34
SouthLouisiana	Below			
Lockport	20— .80	2¢	34— 1.10	9-29-33
Iowa, Cameron Mds.	Below 20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33
Elk Basin	*1.17			9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Grass Creek (Light)	*1.17			9-29-33
Big Muddy	*$1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Pondera	*.65			8-25-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.15			2- 1-35
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.08			5-26-34
California				
Signal Hill	14— .65	1¢	16— .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B., Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .83	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Rey	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .90	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans Domingues	23— .83	3¢	24— .86	9- 6-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .85	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	26— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .78	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, McKittrick, Kern River	14— .57		19— .57	9- 6-33
Midway-Sunset, Elk Hills, Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .68	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 2-33
Pennsylvania				
Bradford	*2.35			2- 4-35
Sw Pa. Pipe Line	*2.02			2- 4-35
Eureka Pipe Line	*1.97			2- 4-35
Buckeye Pipe Line	*1.87			2- 4-35
Corning Grade	*1.32			10- 2-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

Summary of Wells Completed in the United States

Week Ended April 27, 1935

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1935	Total Completions this date 1934
Alabama	...	...	...	...	.....	3	1
Arkansas	9	4	...	5	.....	64	22
California	17	15	...	2	15,670	236	113
Colorado	1	1	...	...	1,580	4	5
Illinois	...	...	...	...	.....	8	3
Indiana	...	...	...	...	.....	48	54
Kansas	29	17	...	12	12,540	437	275
Kentucky	...	...	...	...	.....	40	28
Louisiana	7	5	...	2	2,690	238	234
Michigan	...	...	...	...	.....	105	138
Mississippi	...	...	...	...	.....	7	10
Montana	1	1	...	...	90	22	34
New Mexico	3	3	...	...	8,220	83	32
New York	...	...	...	...	.....	...	3
Ohio	27	5	11	11	27	455	280
Oklahoma	51	32	1	18	41,465	699	627
Pennsylvania	1	...	...	1	.....	51	131
Texas	265	188	5	72	725,600	3,754	3,035
Utah	...	...	...	...	.....	...	3
West Virginia	10	2	6	2	3	159	164
Wyoming	2	2	...	...	45	14	8
Totals this week	423	275	23	125	807,930	6,428	5,206
Totals last week	466	296	53	96	864,180	6,005	...
Totals this year	6,428	4,223	567	1,617	12,640,200	...	...

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
March 5, 1933	.....	.....	Cut 24.
May 2, 1933	.....	Cut 19.	.....
May 9, 1933	Cut 20.	.....	.....
May 22, 1933	Up 10.	.....	.....
June 19, 1933	Up 10.	Up 19.	.....
June 26, 1933	Up 10.	.....	Up 9-12
July 6, 1933	Up 13.	Up 10.	.....
July 17, 1933	Up 15.	.....	.....
July 28, 1933	Up 15.	.....	.....
August 11, 1933	Up 10.	.....	.....
August 24, 1933	.....	Up 10.	.....
August 30, 1933	Up 15.	.....	.....
September 6, 1933	Up 10.	Up 10.	Up 18.
September 8, 1933	.....	Up 15.	.....
May 1, 1934	Up 10.	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25.	.....	.....
January 4, 1935	Up 15.	.....	.....
February 4, 1935	Up 15.	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Three percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Three percent of gross value at well and ½-cent per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

KEROTEST
REGISTERED U.S. PAT. OFF.

WHEN SPACE IS AT A PREMIUM ON A HIGH PRESSURE WELL

KEROTEST TYPE "WX" STANDARD "6000" CROSS TYPE DRILLING VALVE

You will welcome this Kerotest Cross Type Drilling Valve because it simplifies a well setting and enables you to make an extremely compact installation with ample clearance for attachment of flow line valves direct to outlet arms . . . a real high pressure drilling valve made of heat treated manganese molybdenum steel with an average ultimate strength of 106,444 lbs. per square inch.

Your choice of flanged or screwed ends and in test pressures from 3,000 to 6,000 lbs. per square inch and for all casing sizes.

KEROTEST
MANUFACTURING COMPANY
Pittsburgh, Pa.

KEROTEST
REGISTERED U.S. PAT. OFF.

TRINIDAD OIL INDUSTRY ADVANCES BOTH TECHNICALLY AND STATISTICALLY

(*Continued from page* 44)

Total oil produced from the inception of the petroleum industry in the colony to the end of 1934 is 104,614,791 barrels.

The highest monthly production peak in the history of the island was reached in July, 1934, when the amount of oil produced reached over one million barrels for a single month for the first time.

Production figures for the year 1934, given by months, are as follows in barrels:

January	852,189	July	*1,008,669
February	766,254	August	975,697
March	876,544	Sept.	919,469
April	876,950	October	906,152
May	926,785	Nov.	907,655
June	947,122	Dec.	930,877

*Peak.

The production of crude oil has been increasing steadily year by year since 1920 until the end of 1932. Production for the year 1933, however, showed a decrease as compared with 1932. 1934 production now has exceeded all previous peaks and actually tops the year 1932 by 768,298 barrels. It is reasonable to expect that the total for 1935 should even exceed that of 1934.

During 1934, 124 wells were drilled of which 92 percent were completed as commercial producers.

The bulk of petroleum produced in Trinidad is derived from folded miocene sands and is of naphthenic base.

General Operations

The recent increase in the operations of the various companies has continued steadily throughout 1934. There is not, however, much to record under the head of new installations but it should be noted that during the previous year two new refineries and a deep water loading pier were completed in the island.

The following table shows the number of feet drilled and the quantity of oil obtained during 1934 as compared with 1932 and 1933:

	1932	1933	1934
Feet drilled	173,287	235,519	351,783
Barrels of oil obtained	10,126,065	9,561,354	10,894,363

The number of companies engaged in the winning of oil at the end of the year was 14. The most important company in the island from the point of view of refining is Trinidad Leaseholds, Ltd., which is only second to Apex (Tdad) Oilfields in respect to production. Trinidad Leaseholds, Ltd., refinery throughput during 1934 was in the neighborhood of 70 percent of the colony's total.

Both the aforementioned companies have large holdings in the Fyzabad area which district supplies 68 percent of the colony's total oil production.

Exports

Petroleum and its exports have for several years formed the largest part of the colony's exports, the percentage of same during 1934 being (about) 55 percent as compared with 52 percent for the previous year.

Local

The comparative statement given below shows the quantity of oil refined in the colony year by year.

	Barrels
Previous to 1920	4,051,373
1920	1,395,487
1921	1,806,016
1922	1,820,018
1923	2,360,279
1924	3,433,902
1925	3,790,343
1926	3,786,876
1927	4,796,223
1928	6,725,383
1929	7,642,726
1930	7,989,679
1931	6,899,144
1932	7,635,296
1933	9,129,810
1934	*10,000,000

*Estimated.

Summary

During the years 1931 and 1932 the petroleum industry in the colony, as everywhere else in the world, was considerably handicapped on account of the general depression. During 1933, however, conditions began to improve and 1934 has seen some appreciable expansion in the operations of the major companies.

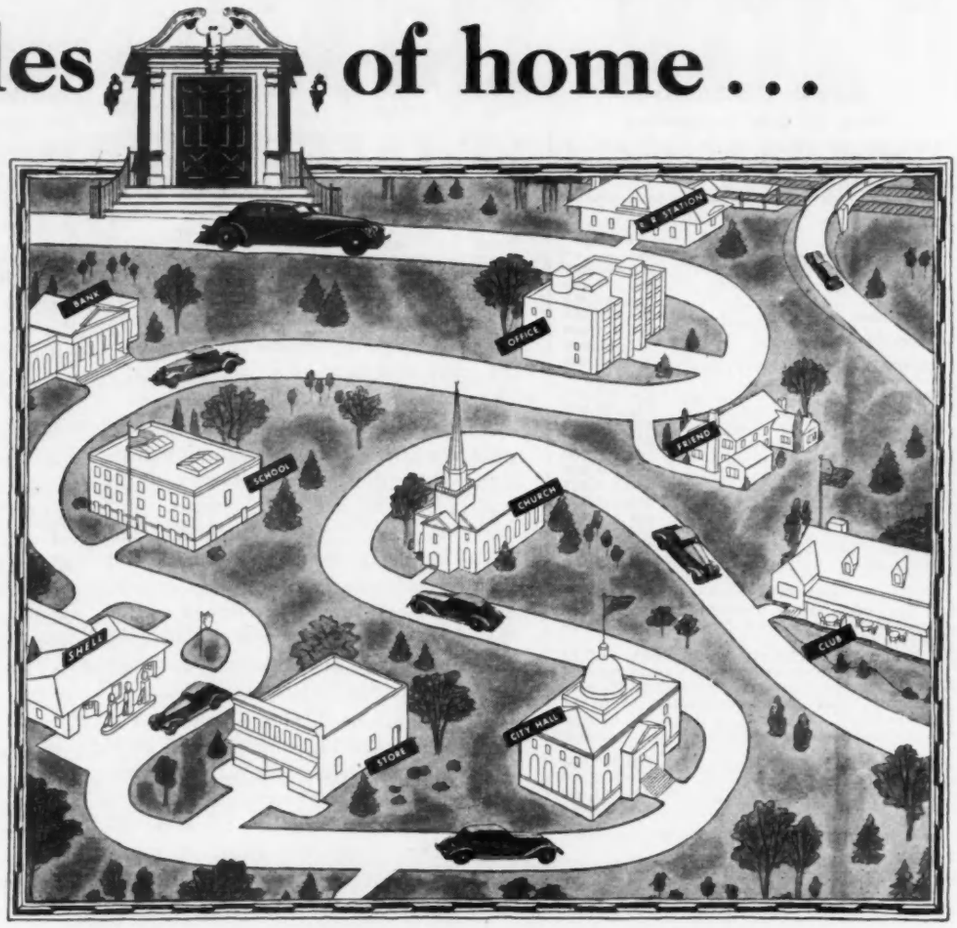
It will be noted that although the greatest amount of footage drilled in the island in any one year was recorded in 1930, the year just passed has set a new peak both for the monthly production figure and yearly total.

During the year under review a deputation from Trinidad proceeded to England to state the case to the Home Government for a preference on Empire-produced oil products. So far there has been no news as to what effect, if any, has been given to the recommendations made by this deputation.

It can be maintained, however, that a preference for Empire-produced oil will stimulate expansion of the industry in Trinidad and so increase the scale of trade with the mother country.

In general, it is stated that the situation of the industry here can be considered satisfactory, having regard to prevailing world conditions in industry, and that operations should continue to expand, consistent, of course, with the return of world conditions to normal.

80% of your driving is within 25 miles of home...



Constant starting, stopping and accelerating waste your money *if your gasoline hasn't these 3 different kinds of power*

THE average car is continually DASHING BACK AND FORTH within a few miles of home or office . . . going to the store, school, movies . . . making business calls!

This calls for 3 kinds of power in your gasoline . . . POWER for quick starting, POWER for acceleration, POWER for steady runs!

Unless these 3 types of power are present—and unless they are in PERFECT BALANCE—your short runs can waste many dollars!

Super-Shell is THE FIRST GASOLINE to have these 3 kinds of power —*in perfect balance!*

That's why Super-Shell, the first truly balanced gasoline, cuts driving costs IN 3 WAYS!

Can save up to a cupful of gasoline on every "Cold" start. In summer or winter, Super-Shell starts instantly, often warms up in *half* the time of ordinary gasolines. So there's less choking and you use less gasoline. 16 cupfuls saved amount to a whole *gallon!*

Can save up to a cupful of gasoline in 10 minutes of Hard Pulling. Because of its even volatility, you can accelerate rapidly or race your car up steep hills in high gear—on less gasoline! And what's more, you avoid that knocking which in a few minutes can waste up to 10 per cent of your gasoline.

Can save up to a cupful of gasoline in One Hour of Steady Running. Every single drop of balanced Super-Shell vaporizes more completely at every engine temperature. In addition to saving on short trips, many motorists report mileage increases on long runs equal to a saving of a cupful every hour.

THESE THREE SAVINGS of gasoline result in more mileage per tankful—big monthly and yearly savings. Super-Shell is on sale from Coast to Coast at more than 30,000 neighborly Shell stations . . . at *no extra cost!*

Nine strategically located Shell Refineries: Arkansas City, Kan.; Coalinga, Cal.; Dominguez, Cal.; East Chicago, Ind.; Houston, Texas; Martinez, Cal.; Norco, La.; Wilmington, Cal.; Wood River, Ill.

SHELL **SUPER-SHELL**

Saves on today's stop-and-go driving

Oil Industry's Condition Further Improved in April

Crude Oil Stocks

(Since Oil Code Inauguration)

Bureau of Mines figures as compiled monthly, comprising all crude in storage in the country.

At end of:	Total Bbls. In Storage
August, 1933	360,001,000
September	359,979,000
October	356,885,000
November	355,614,000
December	355,394,000
	*354,305,000
January, 1934	353,642,000
February	531,641,000
March	354,067,000
April	354,350,000
May	355,883,000
June	357,239,000
July	355,260,000
August	350,838,000
September	348,937,000
October	346,415,000
November	341,165,000
December	337,254,000
January, 1935	338,174,000
February	337,319,000

*On revised basis, 1,089,000 barrels having been transferred from crude to fuel oil in California.

Trend of stocks situation since end of February, figures being from weekly reports to federal government, embracing 98 percent of total stocks, excluding those of producers.

February 23	321,367,000
March 2	323,575,000
March 30	324,181,000
April 20	324,373,000

Motor Fuel Stocks

(American Petroleum Institute figures, as shown in weekly reports)

DATE	Motor Fuels Stocks, bbls.
September 9, 1933	50,913,000
September 30	50,457,000
October 28	52,727,000
November 25	51,934,000
December 30	51,580,000
January 27, 1934	50,229,000
February 24	55,976,000
March 24	57,879,000

After March 24, 1934, figures shown represent stocks of finished gasoline, to be marketed as motor fuels, including natural gasoline which has been blended, and gasoline made from refinery still gases.

March 24	57,011,000
March 31	57,098,000
April 28	56,011,000
May 26	54,493,000
June 30	51,405,000
July 28	48,597,000
August 25	46,120,000
September 29	43,850,000
October 27	41,993,000
November 17	*39,892,000
December 1	40,831,000
December 29	43,969,000
January 26, 1935	47,888,000
February 23	54,399,000
March 2	55,654,000
March 30	56,388,000
April 20	55,865,000

*Low point of year.

APRIL was another month of successful results in the petroleum industry. The statistics of the industry for the period were predominantly favorable. They showed a continuation of close balancing of supply with demand, the stocks of both crude oil and gasoline having been held about stationary. The price situation improved materially during the month. Drilling was 20 percent higher than in the previous month, establishing a new peak of the "recovery" era, with the greatest amount of activity for nearly five years.

Although crude oil production was substantially higher than the amount recommended by the federal government, it was in fair balance with demand. For there was but little addition to crude stocks during the month. The crude that was refined was fulfilling only current demand, moreover; as evidenced by the fact there were no great changes in the stocks of refined oils. Motor fuel stocks, in fact, were reduced substantially.

The nation's production of crude oil in April aggregated 77,003,100 barrels, averaging 2,566,770 barrels daily. That was approximately 40,000 barrels per day more than the oil administration's recommendation. The excess was lower, however, than that of about 48,000 barrels per day recorded in the previous month.

These figures on production are based on weekly estimates of the American Petroleum Institute, and do not make allowance for surreptitiously produced crude. Such production has been chiefly in East Texas. During April the illegal production apparently averaged around 30,000 barrels daily, which was possibly 5000 barrels a day more than in March.

Crude Stocks

Crude oil stocks did not change materially during April. The federal government's weekly reports on crude stocks, covering about 98 percent of total stocks, and excluding producers' stocks, indicated that the crude on hand rose to 324,373,000 barrels by April 20, from 324,181,000 barrels held March 30. During March the crude stocks had increased about 500,000 barrels. But the prevailing trend of crude stocks has been downward for several years.

April brought a reversal of the upward trend of gasoline stocks, which had extended from mid-November through March. Between March 30 and April 20, the nation's total finished gasoline stocks at refineries and in transit were reduced from 56,388,000 barrels to 55,865,000 barrels. These figures are from American Petroleum Institute reports.

There was no change in crude oil prices during April, but there was considerable hope that prices might improve. The crude market was strong, and purchasers were actively seeking new well connections in some areas. The crude market firmness was a reflection of substantial improvement of wholesale and retail prices of products. Each of the first three weeks of April brought gains in tank car prices of gasoline at Mid-Continent refineries, and during the closing week prices remained stationary but firm. Service station postings advanced during the month, along with the wholsesale prices.

Drilling Increase

Drilling spurted during April, reaching the highest level since July, 1930. Wells were completed during the month at the average rate of 58.5 daily, including oil wells, gas wells, and dry holes. That April Average was 20 percent greater than for the previous month, when completions averaged 48.8 daily. It was the highest average since the 76.6 wells per day drilled in July, 1930. (In August, 1930, completions dropped to 52.4 daily.)

The peak of drilling in 1934 was in July, when completions averaged 53.6 daily. The peak of 1933 was the 47.7 average of December. The low mark of drilling for the depression was reached in June, 1933, when completions averaged only 21.1 daily.

The 20 percent greater drilling in April, compared with March, resulted from increased activity in practically all the oil

United States Production

(Based on American Petroleum Institute estimates, which do not include oil which may have been surreptitiously produced).

MONTH	Daily Average (Barrels)	Federal Agency Allowable
August, 1933	2,748,100	.....
September	2,568,250	2,413,700
October	2,392,900	2,338,500
November	2,267,243	2,338,500
December	2,266,426	2,210,000
January, 1934	2,233,505	2,183,000
February	2,239,070	2,183,000
March	2,339,950	2,282,800
April	2,420,950	2,366,200
May	2,575,380	2,366,200
June	2,588,100	2,528,300
July	2,560,550	2,530,300
August	2,475,300	2,449,300
September	2,431,950	2,341,700
October	2,364,150	2,325,800
November	2,375,400	2,340,300
December	2,414,600	[1]2,307,000 [2]2,460,300
January, 1935	2,500,850	2,460,300
February	2,521,250	2,526,100
March	2,568,800	2,520,300
April	[3]2,566,770	2,527,300

[1]December 1-16.
[2]December 17-31.
[3]Preliminary subject to revision.

Slowly . . . lightly . . . slide your finger across a smooth surface. Exert SUDDEN *pressure. Your finger* STOPS.

The Secret of KABLE KORD PHENOMENAL PERFORMANCE

on flat pulleys lies in simple *"finger-slide"*

IT was pressure, of course, that prevented your finger from sliding. In Kable Kord Flat Belting, it is pressure that provides a positive grip.

Unlike other flat belts, Kable Kord is actually "two-belts-in-one." Its lower section, consisting of pulling cords, transmits the load, while the upper Kable Kords act as a "contactor." The contactor element holds the belt snugly and securely against the pulley. On flat pulleys for group drives, short centers and pivoted motor bases, Kable Kord has *more pull per square inch than any other flat belt made.*

Kable Kord combines ample flexibility with minimum stretch . . . it needs no belt dressing . . . and retains its efficiency over a maximum period of years.

When the Gilmer Engineer calls, permit him to enlighten you further on Kable Kord. Today, write for the Kable Kord Data Book. It's loaded with illuminating and interesting Kable Kord facts.

KABLE KORD'S Advantages . .

1. Made endless and in rolls
2. Increases production
3. Reduces slipping
4. Has minimum stretch
5. Is more flexible
6. Has inherent ruggedness
7. Has more pull per square inch
8. Wears longer
9. Requires no belt dressing

GILMER V-BELTS

Rugged, slipless, flexible, and cool-running. Gilmer V-Belts can be depended upon to deliver a constant flow of maximum power. Sold in standard and special sizes to fit any make or size of drive.

This 26' by 10" Kable Kord is doing heavy duty on a Worthington Diesel engine, driving a Westinghouse 60 KVA-DC generator. On this drive, Kable Kord carries a continuous overload —yet in 27 months' service, it has been taken up but ONE INCH.

L. H. GILMER COMPANY
Tacony, Philadelphia

Manufacturers of **COMPLETE LINE OF POWER BELTING**

V-Belts . . . Kable Kord Roll and Endless Flat Belting . . . Planer Belts . . . Speedage Endless Fabric Belts . . . Cone Belts . . . Roving Frame Belts . . . Moulded Rubber Belts . . . Winder Belts . . . Spinner Belts . . . Refrigerator and Washing Machine Belts . . . Conveyor Belts . . . Round Roll and Endless Fabric Belting . . . Endless Cotton Belts . . . Laundry Feed Ribbons.

SPECIALISTS IN QUALITY BELTS SINCE 1903

Monthly Summary of United States Drilling and Production, April, 1935

STATE	MONTH OF APRIL, 1935						CUMULATIVE, JANUARY THROUGH APRIL, 1935					
	Completions	Oil Wells	Gas Wells	Failures	Initial Prod Bbls. Daily	*Total Bbls. Oil Prod.	Completions	Oil Wells	Gas Wells	Failures	Initial Prod. Bbls. Daily	*Total Bbls. Oil Prod.
Oklahoma	203	138	10	55	369,592	15,468,350	639	410	36	193	907,361	58,983,050
Kansas	144	113	5	26	78,532	4,360,900	398	303	10	85	238,827	17,319,350
Texas	1,257	942	35	280	3,735,118	30,900,200	3,612	2,686	95	831	10,519,729	122,651,700
Louisiana	83	35	10	38	15,825	3,664,550	240	116	23	101	51,789	14,033,450
Arkansas	12	2	.....	10	175	918,300	60	26	1	33	5,650	3,717,400
Southeastern States	3	.....	1	2	.....	.....	8	.....	2	6	.....	.....
Eastern States	205	47	104	54	716	3,150,450	716	195	341	180	4,235	12,583,550
Michigan	36	17	8	11	8,416	1,137,450	107	62	18	27	16,245	4,266,850
Rocky Mountain States	16	10	3	3	755	1,557,050	23	17	.....	6	6,589	5,913,100
New Mexico	24	21	.....	3	71,819	1,474,250	94	69	4	21	171,309	5,735,400
California	65	59	1	5	53,609	14,371,600	305	219	4	82	255,361	59,273,177
Totals	2,048	1,384	177	487	4,334,557	77,003,100	6,202	4,103	534	1,565	12,177,095	304,477,027

Preliminary, subject to revision.

producing states. The exceptions, where April drilling was slightly under that in March, were Arkansas, California, and New Mexico.

From a percentage standpoint, the Eastern States showed the largest gain in April, completions having been about 50 percent greater. Louisiana had about 35 percent more completions in April than in March. Texas and Kansas each showed a gain of approximately 25 percent. Oklahoma activity was slightly greater. Michigan, the Rocky Mountain States, and the Southeastern States also showed more field activity.

A significantly favorable situation as regards prospects for continued improvement in gasoline prices is brought about by reduction of motor fuel stocks at the beginning of the motoring season. In other years it has been practice to accumulate stocks at this time.

Wells Completed in the United States

(Including oil wells, gas wells, and dry holes)

MONTH	Daily Average
January, 1933	30.0
February	30.6
March	26.6
April	25.5
May	25.6
June	21.1
July	23.1
August	30.7
September	36.5
October	40.9
November	46.9
December	47.7
January, 1934	39.7
February	38.1
March	40.6
April	44.0
May	50.7
June	51.5
July	*53.6
August	51.3
September	43.2
October	49.6
November	49.9
December	48.3
January, 1935	47.9
February	49.6
March	48.8
April	*58.5

*Highest since July, 1930, when completions averaged 76.6 daily. Average dropped in August, 1930, to 52.4 and remained below that figure until July, 1934.

Natural Gasoline Association Elects T. R. Goebel New President

(*Continued from Page 16*)

the past year and pointed to the important relationship between the work of such committees as the technical committee, gas contract and gas testing committees and the problems of gasoline plant and gasoline company operation. He reported on the progress in cooperative work between the association and other associations studying similar problems. Following the president's address chairmen of various committees made their annual reports to the association and William F. Lowe, secretary, discussed the relationships and progress made with respect to the Petroleum Code and the natural gasoline industry.

Entertainment at the convention meeting, this year as in the past, was furnished by the Natural Gasoline Supply Men's Association and consisted of luncheons Wednesday and Thursday, the annual dance Wednesday night and the annual smoker Thursday night.

At the meeting of the Natural Gasoline Supply Men's Association Wednesday morning the association approved the plan inaugurated this year, of publishing annually a handbook type of bulletin in which important and valuable technical and engineering information is correlated and placed under one cover for use as a handy reference by those engaged in natural gasoline manufacture. Two thousand copies of the first edition of this bulletin were distributed this year and the response accorded the publication apparently warrant its continued compilation and publication.

The supply men's association elected five new directors at the Wednesday meeting to succeed five directors whose terms expired. The following are the newly elected directors: W. D. Moorer, Moorlane Company; D. W. McKay, Cooper-Bessemer Corporation; W. W. Woobank, Woobank Pump & Machinery Company; C. B. Lane, Foxboro Company, and W. A. Schleuter, Refinery Supply Company.

The retiring directors are H. H. Thiphaus, Taylor Instrument Company; M. F. Waters, Hanlon-Waters, Inc.; J. A. Lupfer, Worthington Pump and Machinery Corporation of Oklahoma; M. H. Kotzebue, Tulsa Boiler & Machine Company, and J. H. Satterwhite, Westcott & Greis.

Thursday's sessions were given over to a symposium on motor fuel volatility trends and the possible effects on automotive engine design and performance. Papers and discussions were presented by A. D. Baur and A. E. Becker, Standard Oil Development Company; T. B. Rendell, Shell Petroleum Corporation, who presented the refining industry's viewpoint. The automotive industry viewpoint was presented by T. A. Boyd, General Motors Corporation, and J. B. Macauley and Gilbert Way, Chrysler Corporation. The symposium was closed by Dr. G. G. Brown, University of Michigan, giving the natural gasoline industry's viewpoint in his progress report on road tests to determine the advantages of the use of fuels of high volatlity in motors designed for their efficient use.

At the final session Friday morning Professor R. L. Huntington, University of Oklahoma, discussed "Stage Separation of Crude Oil-Gas Mixtures," and J. Don Nevius, United States Bureau of Mines, discussed "Bureau of Mines Statistics on Natural Gasoline Production and Distribution.

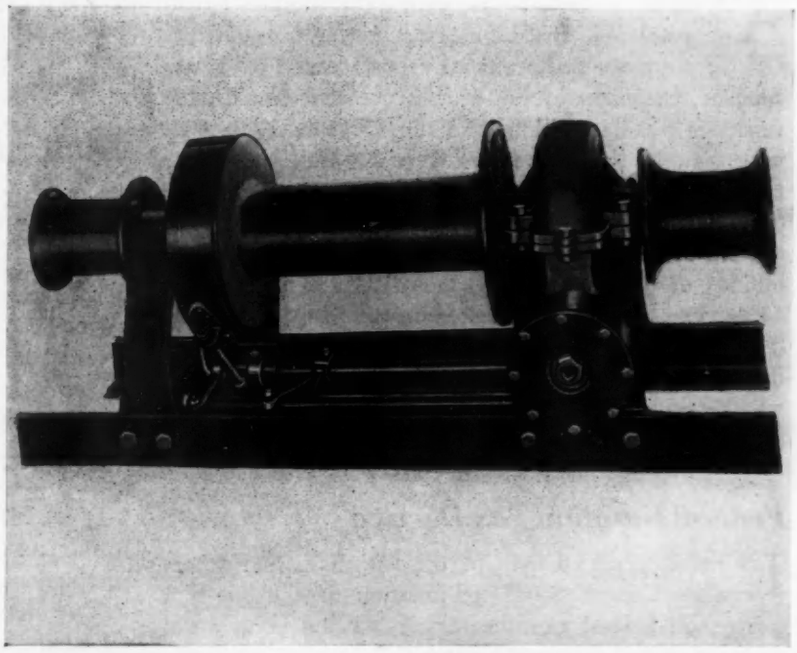
San Antonio, Texas.—Grayburg Oil Company's McKean 14, Cottle Survey, in the Old Luling field, Caldwell County, is flowing 1,000,000 cubic feet of gas per day and spraying a little oil after treating with 25 barrels of acid. The well topped the chalk at 1642 feet, set 6⅝-inch casing at 1644 feet and is bottomed at 1854 feet.

Truck Winches Pull Up To

100,000 POUNDS

SKF *Ease Friction's Drag*

● SKF makes practically *all types of anti-friction bearings.* When SKF recommends a particular type of bearing, therefore, you may depend upon it; its recommendations are *unbiased!*



SKF-EQUIPPED BUILT BY TULSA WINCH MFG. CO.

"Bearings are *never over-rated* for the stress to which they are subject," says Tulsa of SKF Ball Bearings on each end of the gear shaft in this Model 20 All-Purpose Truck Winch.

And Tulsa have been designing and building winches over a period of years. They're in position to know that SKF are built to meet shaft requirements on winches that load oil field equipment. The better performance of their products testifies that SKF *take the guesswork out of bearings* by giving strength for single line pulls up to 100,000 pounds . . . with no delays, no adjustments, and with low maintenance costs. So put your bearing troubles up to SKF and forget them! SKF INDUSTRIES, INC., Front Street & Erie Avenue, Philadelphia, Pa.

SKF
BALL AND ROLLER BEARINGS 3400

Higher Earnings Expected

(*Continued from page 10*)

extraordinary accomplishments in reducing costs and prices of products to a degree offsetting the piling up of taxes, the increase in tax rates would long since have caused decline in consumption and consequent diminishing returns in taxes themselves."

Another Condemnation of Taxes

ADDING its voice to the chorus of protests by oil companies against high taxation was Consolidated Oil Corporation, in its annual report, issued by H. F. Sinclair, chairman of the executive committee. In the report it was asserted that in the 13 years 1921-1933, taxes paid by the oil industry were 2½ times its profits in those years. "On the basis of estimates made by the National Industrial Conference Board that the total tax bill of the United States is about nine and one-half billions of dollars annually, motorists are now paying 13 percent of all taxes collected, in the form of gasoline taxes, excise taxes, property and municipal taxes, and motor vehicle registration fees." The tax on gasoline was described as the equivalent of a 40 percent retail sales tax.

Federal Gasoline Tax Decried

IN the determined fight of oil companies and others against Congressional continuation of the one-cent per gallon federal gasoline tax, it is being pointed out that the tax is extremely unjust. Following are some of the assertions: The tax was resorted to as a "temporary" expedient, to raise money for general fund purposes. It should not be made permanent. Going into the general fund, it is not used for highway purposes, and cannot be defended as benefiting those paying the special tax. It makes gasoline sales taxes average over 40 percent of the retail price. The automotive tax bill in 1933 was about $47.75 per vehicle of all types—37.7 percent more than in 1930. In 1934 the average tax was still higher.

To the above it may be added that state legislatures this year have materially added to the tax handicap of the motor and oil industries. West Virginia, for example, enacted a two percent tax on the value of all motor vehicles, to be paid when the vehicle is registered.

During the past year or so, oil companies, advertising by radio and through other media, have sought to carry to the public the realization of how excessively motorists are taxed. It is quite conceivable that the message can be finally driven home, if the oil companies will continue to publicize it, individually and through concerted public-education campaigns.

Oil Equipment Earnings Up

ALONG with increased business and improved earnings for nearly all oil companies in 1934, there were also better financial records for manufacturers of oil field equipment. One large company recently reported 50 percent higher sales in 1934 than in 1933, and substantial profit compared with heavy loss. It resumed dividend payments. Other oil equipment companies are indicated to have had similar experiences, with drilling and reconditioning of wells substantially higher.

Drilling Higher

DRILIING was 48.8 percent greater in 1934 than in 1933, completions of wells having numbered 17,508 against 11,700 in 1933, according to this publication's records. In 1935 still further expansion of drilling has occurred. Field activity in April, 1935, was the greatest for nearly five years, having been higher than in any other month since July, 1930. Completions in the United States in the first four months of 1935 numbered 6202, compared with 5171 in the corresponding period last year, a gain of approximately 20 percent.

If a similar percentage over 1934 drilling continues to the end of the year, 1935 will furnish around 21,000 completions. It is virtually assured that 1935 drilling will be the greatest for a period of five years, exceeding all annual records back to 1929, when there were 23,463 completions in the United States. (The number dropped in 1930 to 19,848, and subsequently much lower.)

The total drilling that is in prospect for 1935 is comparable with that of the boom years of the late twenties. In 1927 there were 22,301 completions. In 1928 the new wells totaled 19,964.

Present Situation Promising

RECENT weeks have brought still further improvement in the outlook for the petroleum industry. Gasoline tank car prices are now at relatively high levels, following more than two months of steady improvement. Retail prices have also improved substantially in the meantime. The crude market has been greatly strengthened, consequently, and active solicitation of new well connections by purchasers gives tangible foundation for hopes of producers for higher crude prices. Demand for petroleum and petroleum products continues at relatively high levels, and there is continued success in balancing supply with the demand.

This Is To Advise..

that The Lane-Wells Co. *is exclusive licensee under U. S. Patent No. 1,582,184 covering broadly, Method and Means for Gun Perforating Well Casings; of which patent, some of the claims read as follows:*

Claim 2 ▸ "A method of perforating a well casing in place in a well hole, which comprises lowering an explosive charge down the well casing, exploding the charge, and directing the force of the charge in the direction of the well casing and thereby perforating the same."

Claim 4 ▸ "In a device for perforating a well casing in place in a well hole, the combination of an explosive charge, a body holding the explosive charge, said body being sufficiently strong to resist the force of the explosive charge, lateral ways for directing the force of the explosive towards the well casing, slugs normally closing the ways, and means for detonating the explosive in place in a well hole."

• • • We are likewise licensees under other United States and foreign patents and patents pending involving the same subject matter.

• • • In view of the interest of readers of this journal in this operation, The Lane-Wells Co. believes all should be advised of the existence of the foregoing patent and patents pending. The Lane-Wells Co. regards this patent as valid and fundamental in the art of Gun Perforating Well Casings, and consequently both the Company and our Licensor are prepared to protect our rights under this patent and other related patents.

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Gas Bill Governing Wastage in Texas Panhandle Is Passed

(*Continued from Page 16*)

daily capacity of all gas wells producing the same kind of gas in the same common reservoir or zone;

3. All other factors which are pertinent, provided "that the commission shall not take into account the size of the tract upon which any gas well or wells are located in excess of the efficient drainage area of such well or wells, producing at 25 percent of the daily productive capacity . . . "

To determine the proper drainage area, the commission must consider formation pressure, permeability and porosity of the formation, and the well bore's structural position, "together with all other factors taken into account by a reasonably prudent operator in determining the drainage area for a gas well."

The commission also is required to determine the market demand for sweet gas and limit production to that demand, to be used for light and fuel, or to an amount which may be produced without waste. Sour gas production must also be limited to the market demand for that substance.

In formulating such a program, the commission may not reduce the allowable of a well with a potential of 200,000 cubic feet per day to less than 50,000 cubic feet per day, or 25 percent of the open flow.

On the other hand, the maximum allowable shall not exceed 25 percent of the potential, unless ordered by the commission to prevent waste. Those wells which are assigned an allowable of more than 15 percent of the potential, whose production at this rate results in the intermingling of sweet and sour gas, may be cut back further.

As several wells in the Panhandle produce gas from one stratum and oil from another, the commission has been authorized to include in the allowable for a well that amount of gas which is produced along with the oil, subtracting this from the amount allowed to be produced from the gas stratum.

Zoning

If the general proration program outlined previously proves unsatisfactory, the commission is given the right to zone the field, treating each zone as a separate gas field and prorating it separately.

Allocations would be made to the zones first, giving each zone its share of the market for gas from the reservoir. Then allocations would be made to wells within each zone, based on the demand for gas from that zone. Separate regulations governing production in each zone, to take care of peculiar conditions, may be promulgated by the commission if the necessity arises.

If an operator refuses to use or sell his gas after having been offered a connection or market "at a reasonable price," his well may be disregarded in making allocations, and his share of the gas market prorated among the other wells.

The new law permits lessors, lessees, operators, or other persons, firms or corporations "owning or controlling production, leases, royalties or other interests in the separate properties of the same producing gas field," to join in the development of their properties. This development may be in the form of a market, or of their several producing leases. Such operations, however, must be carried out with the approval of the Attorney General of Texas.

A complicated saving clause is appended to the bill. This includes a provision which will prevent the bill from becoming actually effective until October 1, 1935. During this time lines are to be built from sour gas wells to the various carbon black plants, sweet gas wells are to be connected to the pipe lines, and the railroad commission is to have time to set up the complicated program provided.

Another phase of the savings clause specifically recites that nothing in this act shall in any manner be construed as repealing any section of the market demand law recently passed.

Sponsors of the new law consider it a foregone conclusion that there will be numerous attacks upon it. However, they feel that they have presented an answer to the problem of controlling Panhandle gas waste.

Most questionable of all the clauses are those dealing with proration, especially the zoning clause, and there is grave doubt in the minds of many concerning the provision which gives the commission the power to consider the "correlative rights" of the various parties at interest in the Panhandle gas field.

C. of C. Studies Oil Situation

(*Continued from Page 14*)

market demand; and interstate compacts among the oil-producing states, Congress to control imports and prevent the movement in interstate commerce of oil produced in violation of state law.

However, he explained, "it is essential that private initiative in the oil-producing industry continue to operate freely and energetically; otherwise the effort to find new oil fields may be seriously checked. The oil-producing industry seeks stabilization, but it must avoid regimentation.

"It is perfectly safe to predict that many large new oil fields will be discovered in the United States in the future," Mr. Pratt assured the chamber, but eventually discovery will begin to lag seriously behind consumption. Then the American manufacturer of liquid fuels and lubricants may be expected gradually to supplement the supply of raw material previously obtained from oil, probably from coal.

The change, he predicted, will take place gradually, as the oil supply slowly fails, and will start before prices of products to the consumer advance far above present levels, assuming some future relief from excessive gasoline taxes.

Hot Oil Confiscation Planned by Texas Officials

Austin, Texas.—A bill permitting the confiscation of hot oil has been prepared by Attorney General William McCraw to be submitted by the Railroad Commission at the current session of the Legislature.

Both the Railroad Commissioners and the Governor have advocated such a bill, and McCraw has drawn an opinion holding that such an act would be constitutional.

He pointed out that Assistant Attorney Generals W. J. Holt and Archie Gray have found that some law of this nature is almost essential if illegally produced crude or products are to be impounded.

In trial of cases before the courts, Gray said, the court has frequently hesitated to stop the shipment of either crude or products although the evidence presented proved conclusively that the oil resulted from excessive production.

The courts point out that the conservation laws limiting production are based on the conservation of the natural resource for the public welfare, but oil permanently impounded gradually deteriorates and is as much wasted as though it were the result of wasteful production.

The bill drawn by the attorney general would declare such oil a nuisance, and after due court procedure, it would be confiscated to the use and benefit of the state. Income derived from such sales would go to the general revenue fund of the state.

The bill as drawn was sent to the Railroad Commission for their consideration, to be offered to the Legislature later.

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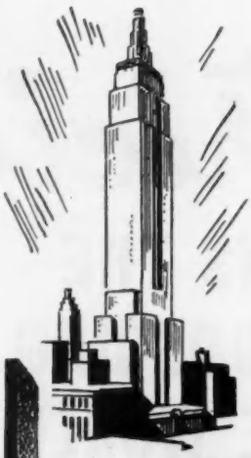

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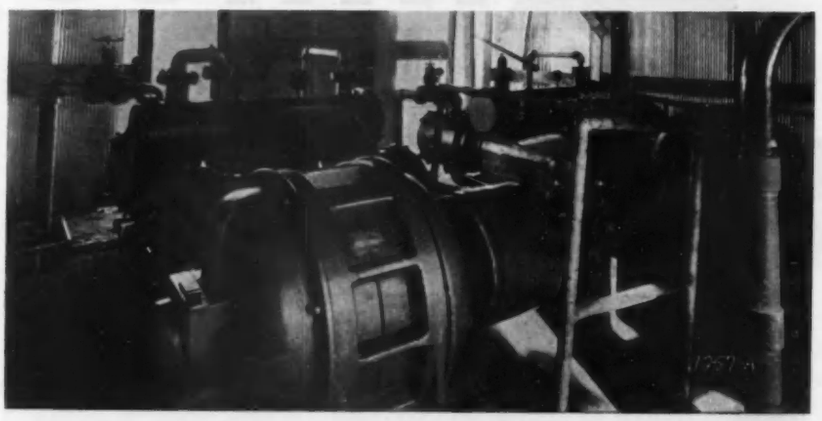

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Utility Control Bill Passed by Texas House

Austin, Texas.—The House of Representatives last week passed the new Montgomery utility control bill by the surprising majority of 110 to 19.

The measure is sponsored by the administration as a means of controlling gas, light, water, power and telephone rates. It is a complete set-up for controlling utilities through a separate commission established for that purpose.

Within 24 hours the Senate had passed out of committee a substitute bill far less comprehensive, and conceded to be more nearly in line with the ideas of the utility companies.

This is the first action of the Senate on any general utility control bill during the present session, although three bills were introduced during the first days of the legislative meeting.

Annual Meeting of Stripper Well Association Tomorrow

Tulsa.—Announcement has been made by H. B. Fell, executive vice president of the National Stripper Well Association, that William Bell of Robinson, Illinois, president of the association, has called the annual meeting of the National Stripper Well Association to be held at the Biltmore Hotel at Oklahoma City, Oklahoma, at 10:00 a.m., Tuesday, May 7, 1935.

This meeting is called for the purpose of electing officers and members of the executive committee of the association for the ensuing year and to transact such other business as may come before the meeting.

The National Stripper Well Association is a federation of oil and gas associations from various sections of the oil producing areas of the United States. The purpose of the association is to protect the interests of stripper well owners or operators, their employes, and the owners of royalties on such wells.

Matters in connection with any revisions to or extension of the Petroleum Code pertaining to stripper wells will be considered. Proper determination of costs of producing crude petroleum in areas of wells of small and settled production and the collection and tabulation of other important statistical data pertaining to such wells will also be given consideration. The report of the Petroleum Code Survey Committee on Small Enterprise and the effect of the recommendations made in that report on stripper well operations will be fully discussed, as will all matters pertaining to the conservation of our natural petroleum resources and the stabilization of the petroleum industry.

Court Upholds *Texas Oil* Shipment Control

Austin, Texas.—The right of the Texas Railroad Commission to control interstate as well as intrastate shipments of illegally produced oil, or the products thereof, was upheld in a decision handed down by the Federal Court in the Western District last week.

A three-judge court, consisting of Circuit Judge Hutcheson and District Judges West and Kennerly, handed down this opinion in three cases recently tried in Houston. Hercules Oil Company, George C. Peterson and H. T. Melton had each filed suit against the Commission seeking to move oil without tenders. More than 500,000 barrels of oil were involved.

The plaintiffs urged that commission orders requiring tenders on products had been promulgated before a statute was in effect authorizing such orders, and that a statute subsequently enacted was invalid because it placed a burden on interstate commerce.

State Can Prohibit

The court, speaking through Judge Hutcheson in no uncertain terms, declared the state had the right to abate this "nuisance," citing as an authority the activities of the federal government in controlling liquor.

"We think it may not be doubted," the opinion said, "that the state has the right to prohibit the production of oil to prevent waste, because such production is in the nature of a public nuisance, and that it may make and authorize all reasonable regulations to bring about the abatement of this nuisance, extending to preventing movement in commerce of illegally produced oil and its products. We think it perfectly reasonable for the state . . . to forbid transportation, either interstate or intrastate, of oil illegally produced . . . ample authority for the act of the legislature prohibiting the transportation or handling of illegally produced oil, or its products, and the prohibition against the illegal production of oil has been in force for some time . . ."

The court also pointed out that the Hercules and Peterson interests had no complaint, since they did not own the oil. It was found that "Their rights under their contracts vested only if and when the oil could be moved . . ."

"Courts of Equity," declared Judge Hutcheson, "do not issue their writs to aid law violators, to assist them in evading valid laws . . . Especially will Federal Equity Courts not make their writs available to such suitors against state laws."

Members of the Railroad Commission and the Attorney General's Department were elated over these decisions, which they declared would do much to abate the flow of illegally produced oil and products.

Public Land Lease Permits Are Extended

Washington, D. C.—Anticipating the enactment by Congress of new legislation affecting oil and gas prospecting permits, Secretary of the Interior Harold L. Ickes has announced that all such permits outstanding which would expire prior to August 1, next, will automatically be extended to that date.

Suggestions for the incorporation in the pending legislation of provisions for the extension of permits were filed recently by the secretary with the House committee on public lands.

An automatic extension until December 31, 1936, of outstanding permits which have heretofore been extended, with discretionary authority to the secretary to grant an additional extension for one year, but not beyond December 31, 1937, was recommended.

The secretary pointed out that the suggested amendment would leave to him the power under existing law to determine the adequacy of equities on permits which have not heretofore been considered for extension, and explained that the purpose of the suggestion was to protect substantial outstanding equities of permittees and allow a reasonable period of time for the transition between the present permit system and a new leasing system which is expected to be provided.

Oklahoma Legislature Passed 17 Oil Bills

Oklahoma City.—Of the 168 bills enacted by the fourteenth session of the Oklahoma legislature, 17 dealt directly or indirectly with the oil industry. Among the more important which already have become law are S. B. 208, ratifying the interstate oil compact; S. B. 346 and H. B. 2, dealing with the same subject.; H. B. 34, creating the Oklahoma Conservation Commission which is a combination of the conservation, proration and well log divisions of the corporation commission under one head; H. B. 87, increasing gross production tax from three to five percent; H. B. 127, relating to spacing of wells of tracts of not less than 10 acres each except by agreement of 80 percent of the operators owning not less than 80 percent of the acreage involved; H. B. 441, providing for a one percent sales tax on motor vehicles the first year of registration; H. B. 188, providing for a tax of one eighth of one percent per barrel for proration enforcement; H. B. 192, providing a new net income tax law with rates ranging from one to nine percent; and H. B. 29, modifying gasoline tax diversion. The latter was on the governor's desk awaiting his approval or rejection.

Continue Operation of Pledger Stripping Plant

Austin, Texas.—The Texas Railroad Commission has issued an order permitting the continued operation of the Paramount stripping plant until August 1, 1935. The plant is in the Pledger field, Brazoria County. This action was taken last week under the provisions of the new gas waste law which became effective on April 30.

The new law provides that until August 1, 1935, plants now operating under permits from the commission may continue to process sweet gas as authorized by the permit.

The commission pointed out in its order that the permit was issued to do equity to the affected parties, and as a matter of public necessity for the benefit of citizens in Brazoria and Matagorda Counties.

This order was the first issued by the commission under the provisions of the new statute.

During the time the gas waste bill was before the legislature, representatives of the Danciger interests, operators of the plant, sought to have included a provision that would permit this particular plant to continue stripping sweet gas and blowing the residue into the air. These efforts were fruitless.

As pointed out by the commission in its order, there is no fuel market for the gas from this field.

Carter Conuty

Ardmore, Oklahoma. — Carter Oil Company's Williams 1, SW NE SW 27-2s-3w, an interesting deep test in the middle of the old Fix field, in northwestern Carter County, was drilling below 5636 feet in Sylvan shale, the top of which was not available. Hunton lime was topped at 4935 feet and at 5314 feet the bit was still in this formation. This is one of the series of deep southern Oklahoma tests on Carter Oil Company's development schedule.

Thomas Control Bill Is Revised

(Continued from Page 12)

authority so to do, the amount of production of crude petroleum in the state and the pools, fields, leases and properties located therein shall be regulated and determined by such state authority. When no applicable quota prescribed under Section 9 is in effect (quota in commerce), it shall be unlawful and a violation of this act for any person to produce crude petroleum in excess of the amount permitted under such state law or under any ruling, regulation or order made pursuant thereto, or to place, receive, or transport in intrastate commerce crude petroleum produced in excess of such amount, or products derived therefrom in whole or in part, such acts being here found to affect commerce among the states and with foreign nations, and to cause waste.

"In any state or area in which there is no authority under state law authorized to regulate or determine the amount of production of crude petroleum, it shall be unlawful and a violation of this act for any person to produce crude petroleum in excess of any quota prescribed under Section 9 of this act."

The scope of the legislation was expanded to cover the development of new pools, permitting voluntary agreement which would be regulated and enforced by the board. The new provision is as follows:

"A new field or pool is any commercially productive accumulation of crude petroleum as defined in Section 7 of Article III of the Code of Fair Competition for the Petroleum Industry approved by the President, August 19, 1933. The plans for the development of new fields or pools, approved by the administrator of said code, are continued in effect unless and until rescinded or modified under this act. Hereafter each new field or pool shall be governed by the provisions of this act. The board is authorized to approve voluntary agreements between and among persons engaged in the petroleum industry for the orderly, systematic and scientific development of new fields or pools where it finds after proper hearings that such agreements will protect interstate or foreign commerce, prevent waste and aid in providing for the national defense. Whenever any such agreement has been executed by a majority in both number and interest, as determined by the board and approved by said board, and the board has reason to believe that any person is engaged in drilling or other activities affecting said new field or pool which disrupt or threaten to disrupt the effective operation of the agreement or plan incorporated therein, the board shall immediately call a hearing at a time and place convenient to all parties in interest as determined by it, and shall through the medium of such hearing determine whether the purpose of this act to protect interstate or foreign commerce, to prevent waste and to aid in providing for the national defense, will be defeated or threatened with defeat by such drilling or other activities, and should it find that such purposes will be defeated or threatened with defeat, it shall order such person to cease and desist from such drilling or other activities and a violation of such order shall be a violation of this act.

"In the approval of any such agreement relating to any new field or pool located within any state in which there is a duly established regulatory commission or agency charged with the duty of conserving oil and gas and preventing the waste thereof, the board is directed to consider such agreement jointly with such commission or agency, or representatives thereof, before granting approval to such agreement."

No changes were made in the penalty provisions or in the provisions covering procedure and court review. It is provided that the bill is not to be construed as repealing such portions of the oil code as are not necessarily inconsistent therewith nor as repealing the Connally law.

Northern Utilities Files Bankruptcy

Casper, Wyo., May 3.—Northern Utilities Company today filed Bankruptcy proceedings in federal court at Cheyenne. Hearing was set May 24, to consider whether debtor company may operate property under reorganization plan or company to operate under trustee.

Northern Utilities Company is faced with laying a gas pipe line from Clayton, Wyoming, to Bridgeport, Nebraska, at estimated cost of $1,250,000, as Standard Oil Company (Indiana) has served the company with 18 months' notice it will not renew lease on oil line through which it has been running gas through eastern Wyoming, western Nebraska during the past five years, Northern Utilities Company absorbed its operating companies, New York Oil Company, North Central Gas Company, both of Casper, last fall. C. A. Munroe, New York, capitalist is president of Northern Utilities Company.

393 New Tests Are Started in Texas

Austin, Texas.—Permits for the drilling of 393 new wells were approved by the Texas Railroad Commission last week, about twice the average usually granted during any seven-day period.

East Texas was again at the top of the list with 119 new wells. There were 52 in Gregg County, 34 in Rusk, 28 in Upshur and 25 in Smith County.

North Texas was second with 87 wells reported. There were 45 in Archer County, 15 in Young, Wilbarger listed 11 and Wichita County added 10.

Southwest Texas operators were unusually active, listing 44 new locations, with 10 each in Bee and Live Oak Counties. In the Guf Coast district 27 new wells were reported.

West Central Texas was another scene of unusual activity with 40 new permits, 18 of which were in Shackelford County.

The Panhandle District listed 31 new permits with 15 in Gray County, and there were 21 from the West Texas District.

East Central Texas listed 24 new locations, of which 17 were in Anderson County.

Oil May Be Included In French Trade Pact

Washington, D. C.—Concessions for American exporters of crude oil and refined products to France may be discussed during negotiations for a reciprocal trade agreement with that country which the State Department on April 30 announced would immediately be undertaken.

A public hearing at which representatives of American producers, manufacturers, exporters and importers may present their views will be held June 24 by the Committee for Reciprocity Information. Briefs may be filed with the committee up to June 17.

During the five years following 1929, it is disclosed by figures compiled for the State Department by the Department of Commerce, there was a heavy decrease in our oil trade with France and a shift from gasoline to crude, attributed to the recent construction by that country of a number of modern oil refineries whereby it does its own refining.

Whereas exports of crude oil have increased from 3544 barrels valued at $3190 in 1929 to 10,204,140 barrels valued at $12,563,320 in 1934, shipments of gasoline and other finished light products have declined from 8,737,730 barrels valued at $37,106,806 to 1,609,691 barrels valued at $3,644,316; illuminating oil from 1,254,769 barrels valued at $4,021,399 to 88,114 barrels valued at $165,623; lubricating oil from 1,640,386 barrels valued at $12,286,095 to 800,074 barrels valued at $6,491,410, and lubricating greases from 7,852,011 pounds valued at $308,064 to 2,897,305 pounds valued at $108,088. Shipments of gas and distillate fuel oil, however, increased from 249,309 barrels valued at $459,880 to 334,591 barrels valued at $526,952.

Much of the dollar value in 1934, it must be kept in mind, was due to devaluation, France being still on the gold standard.

France is the eighth European country with which steps have been taken to negotiate trade agreements and the eighteenth country to participate in such conversations. Four agreements have been completed and signed, with Cuba, Brazil, Haiti and Belgium, but only the first-named has actually been put into effect.

South Houston Field Hearing on May 16

Austin, Texas.—The Texas Railroad Commission has issued notice of a hearing on the South Houston field, Harris County, to be held in Austin on May 16. The hearing was called at the request of Stanolind Oil & Gas Company, according to Gordon Griffin, chief petroleum engineer for the Texas Railroad Commission.

Supreme Court *Rejects Certificate Asking Opinion on* California Case

Washington, D. C.—Criticising efforts to obtain final opinions in advance of the rendition of definite decisions by the lower courts, the United States Supreme Court on April 29 rejected a certificate from the Ninth Circuit Court of Appeals asking for ruling on points raised in the California oil cases.

Involved in the case were Wilshire Oil Company, Bendini Petroleum Company, Commodore Petroleum Company, Wilshire Annex Oil Company, Ambassador Petroleum Company and George L. Macheris and Alfred P. Macheris, who had appealed from a preliminary injunction of the California Federal District Court restraining them from producing crude petroleum in excess of their allocations under the oil code.

The appellate court certified to the Supreme Court two questions going right to the heart of the question of validity of the industrial recovery act, asking whether it had the power on an appeal from the interlocutory order to decide the question raised by the producers "as to the total absence of a cause of action."

"The certificate dated April 5, 1935, states that certain corporations engaged in the production of petroleum in California have appealed from an order of the District Court granting a preliminary injunction restraining them from producing crude petroleum from their respective wells, in excess of amounts allocated by quotas and operating schedules ordered by the administrator of the code of fair competition for the petroleum industry," the Supreme Court said. "This court by its order of April 9, 1935, afforded opportunity for counsel to file briefs upon the question whether the described appeal presents any question other than whether the district court committed an abuse of discretion in granting an interlocutory injunction. Counsel for the respective parties have filed briefs accordingly.

"Meanwhile the Circuit Court of Appeals has amended its certificate so as to state that the appealing defendants had moved in the District Court to dismiss the bill of complaint upon the grounds that it failed to state facts sufficient to constitute a cause of action and had filed an answer reserving the question; that the motion to dismiss was denied and exception reserved at the same time that the order for injunction was granted; that on the hearing in the District Court the question whether the creation of the petroleum code by the Executive constituted an exercise of an unlawful delegation of legislative power had been argued and that the contention of the appellants had been overruled. In that view the amended certificate submits that the certified questions are addressed to a power of the court of appeals on an appeal from the interlocutory order to decide the question as to the total absence of a cause of action."

In a highly critical vein the court continued:

"This court is of the opinion that, apart from the objectionable form of the certified questions, which are not aptly or definitely phrased, the question before the court of appeals upon the appeal from the interlocutory order is whether the District Court abused its discretion in granting an interlocutory injunction; that the court of appeals is not bound to decide, upon the allegations of the bill, an important constitutional question, as to which the court of appeals is in doubt, in advance of an appropriate determination by the District Court of the facts of the case to which the challenged statute is sought to be applied.

"Nor should this court undertake to determine the constitutional validity of the statute upon such questions as those which have been certified. If this court were to deal with the case in its present stage, it would be necessary to order up the entire record, so that the allegations of the bill, and the case as presented to the District Court, could be properly considered. That course would merely bring before this court the interlocutory order and would result in unnecessary delay in the final determination of the cause.

"The certificate is therefore dismissed."

National Oil & Gas Power Meeting Program Announced

Tulsa.—The Eighth National Oil & Gas Power Meeting will be held in Tulsa at the Mayo Hotel, May 8-11. This is the first time in its history that this important meeting has been held in the oil country of the southwest. The Mid-Continent petroleum section of the American Society of Mechanical Engineers, under whose auspices the meeting is being conducted, is responsible for the convention being held in Tulsa.

The meeting precedes the Mid-Year meeting of the American Petroleum Institute Division of Production by only three days, which makes it possible for visiting oil men to attend two large meetings within one week.

A preliminary program of the National Oil & Gas Power Meeting follows:

WEDNESDAY, MAY 8

9:30 A.M. Registration and Information opens, 16th floor Hotel.

11:00 A.M. Opening Session, 16th floor Hotel.

Chairman: Harte Cooke, Ch. Engr., McIntosh & Seymour Co., Auburn, N. Y.

Experiences with High Speed Diesel Engines in Pipe Line Service, J. B. Harshman, Stanolind Pipe Line Co., Tulsa, Okla.

2:30 P.M. Diesel Fuel Session, 16th floor Hotel.

Chairman: Lester M. Goldsmith, Atlantic Refining Co., Philadelphia, Pa.

Characteristics of Diesel Fuel Oil, W. F. Joachim, Atlantic Refining Co., Philadelphia, Pa.

Evening Program (See final program).

THURSDAY, MAY 9

9:30 A.M. Central Power Plant Session, 16th floor Hotel.

Chairman: H. F. Brindel, Gypsy Oil Co., Tulsa, Okla.

Design of Portable Drilling Machine, Joe A. Niles, Stanolind Oil & Gas Co.

Central Power Plants Transmitting Power Mechanically to Wells, Austin Allen, Phillips Petroleum Co., Bartlesville, Okla.

12:00 Noon. Buses leave Hotel for Inspection Trip to the Hominy

Pumping Station of the Stanolind Pipe Line Company.

FRIDAY, MAY 10

9:30 A.M. Morning Session, 16th floor Hotel.

Chairman: H. W. Carson, University of Oklahoma.

Central Power Plants Transmitting Power Pneumatically to Wells, Paul D. Cornelius, Sullivan Corp., Tulsa, Okla.

Diesel and Gas Individual Well Pumping Units, Glenver McConnell, Shell Petroleum Corp., Tulsa, Okla.

Insurance of Diesel Engines, H. J. Vandereb, Hartford Steam Boiler Inspection Insurance Co.

2:00 P.M. Afternoon Session, 16th floor Hotel.

Chairman: Ralph Miller, Engr., Ingersoll-Rand Company.

Experiences with Fuel-Injection Equipment in Oil Field Service, Carl Behn, United American Bosch Co., Springfield, Mass.

Compressed Air Transmission with Diesel Locomotives, Carl Bjornsson, Engr., Dept., Clark Bros., Olean N. Y.

6:30 P.M. Informal Dinner.

SATURDAY, MAY 11

9:30 A.M. Morning Session, 16th floor Hotel.

Chairman: H. P. Porter, Chairman, Mid-Continent Section A.S.M.E.

Informal Discussion of:

Experience of Explosions in Air Piping Due to Fuel Leaking into Air System.

Air Compressor Explosions and Methods of Correction.

Causes and Correction of Corrosion of Bearings and Crankshafts.

Possibility of Control of Combustion Pressure in Solid Injection Engines to Secure Smoother Operation and to Reduce Stresses on Working Parts.

Texas Senate Passes Boiler Inspection Bill

Austin, Texas.—Annual inspection of oil field boilers would be required under provisions of a bill passed by the Texas Senate last week. The measure is designed to eliminate hazards in the oil fields resulting from weak boilers.

The State Department of Labor would authorize inspection of boilers charging a fee of $2.50 for an external inspection and $7.50 for internal inspection of any boiler. Those boilers regularly inspected by insurance companies or other authorized inspectors would be exempt from the fee. The bill has been sent to the House for approval there.

A.P.I. Coast Men To Discuss Legislation

Los Angeles.—The possible effects of proposed legislation on the oil industry will be the principal subject of discussion at the next regular meeting of the American Petroleum Institute, Los Angeles Basin Chapter, to be held Tuesday evening, May 7, in Shell Oil Company Recreation Hall, corner of Hill and Obispo Streets, Long Beach.

J. Howard Marshall, member of the Petroleum Administrative Board, for California, will speak on federal legislation. Rush M. Blodget, general manager of the Oil Producers Agency, will confine his remarks chiefly to pending California measures.

The program will start promptly at 7:30 p.m., and all oil men are invited, whether or not they are members of the Institute.

Oklahoma City. — The Oklahoma Supreme Court affirmed during the week a decision of the state board of equalization when it dismissed the complaint of Carter Oil Company against assessments for ad valorem taxation. The court held that records necessary for the study of actual property valuations had not been supplied the board.

I. P. A. A. Directors to Consider Oil Legislation

Tulsa.—Wirt Franklin, president of the Independent Petroleum Association of America, has called the semi-annual meeting of the directors of that association to be held at the Biltmore Hotel at Oklahoma City, Oklahoma, at 10:00 a.m. Monday, May 6, 1935.

It is realized that irrespective of whether a new National Industrial Recovery Act is passed or whether the present law is extended, that the Petroleum Code will, no doubt, either be amended or revised, and accordingly, the Petroleum Code as now exists will be carefully considered and no doubt the directors of the Independent Petroleum Association of America at this meeting will determine what changes or revisions in the Petroleum Code the association should request and support in order that the Code may be more equitable and fair.

It is probable that within the next 60 days, such legislation will be passed and code revisions made as will affect the petroleum industry during the next year at least, and since this meeting will determine the position of the largest organized group of independents in the industry with reference to these important matters that have arisen since the annual meeting in December, 1934, it is realized that this meeting and its decisions will be of great interest to the industry as a whole.

Olson Oil Company has the largest potential production of any company operating in Kansas. The Burrton field is largely controlled by it. Above are pictured four of Olson Oil Company's men in the Burrton field. They are from left to right: G. H. Plank, Hugh Stevens, S. O. Olson and G. L. "Deke" Berry. Stevens is production superintendent. Photograph courtesy Don Garrison, Mission Manufacturing Company.

Tulsans Organize Chapter of A.P.I.

Tulsa.—A Tulsa chapter of the production division, American Petroleum Institute, was assured on Monday, April 29, when a nomination committee appointed at a previous meeting submitted the names of J. R. McWilliams, head of the proration department of Carter Oil Company, as chairman; H. M. Cosgrove, executive manager of the Tulsa Purchasing Agents Association, as first vice chairman; and B. P. Sibole, vice president of Stanolind Pipe Line Company, as second vice chairman. An advisory committee composed of the following men was suggested: J. W. Bates, Helmerich and Payne, Tulsa; J. B. Steele, Kewanee Oil & Gas Company, Tulsa; Arch Hayden, Minnehoma Oil & Gas Company, Tulsa; Russell S. Knappen, Gypsy Oil Company, Tulsa; John S. Freeman, Skelly Oil Company, Tulsa; Ralph B. Roark, Shell Petroleum Corporation, Tulsa; Jesse H. Hill, The Texas Company, Tulsa; W. W. Bailey, Sinclair Prairie Oil Company, Tulsa; C. P. Dimit, Phillips Petroleum Company, Bartlesville; A. W. Ambrose, the Empire Companies, Bartlesville; R. E. Miller, Hanlon-Buchanan, Inc., Tulsa; and R. L. Langenheim of Tulsa University.

Organization of the chapter is the result of several preliminary meetings held during the past two weeks and the activities of an organization or planning committee which felt out the sentiment toward such an organization. Almost without exception the move met approval as a necessity in bringing together the men of all phases of the petroleum industry in the Tulsa area. J. R. McWilliams, the suggested chairman, is the father of the chapter idea and was one of the pioneers in pushing this A.P.I. function. The organization will be made permanent at a meeting called for Monday evening, May 6, at which time a report of the constitution and by-laws committee is to be made.

Drilling Plugs on Logan County Wildcat

Navina, Okla.—Sinclair Prairie Oil Company's Koatsch 1, SW SW SW 23-15n-3w, important wildcat test four and one half miles southeast of here in southwestern Logan County, drilled plugs Thursday after cementing 4¾-inch casing at 6319 feet to shut off water in the upper Wilcox sand topped at 6218 feet, and started bailing late Friday. Second Wilcox was encountered at 6323 feet and a drill stem test at 6332 feet showed 1700 feet of oil in 25 minutes.

Continental Oil Company has staked location for Hildreth 1, SE SE SW 22-15n-3w, one half-mile directly west. Royalty prices under acreage offsetting the Koatsch had increased to $650 per acre and under the Hildreth tract to $450 per acre.

Stanolind Oil and Gas Company, Amerada Petroleum Corporation et al set 237 feet of 12½-inch surface casing and were waiting on cement to set at Community Nunn 1, SE SE NW 25-15n-1e, 16 miles southeast of here in southeastern Logan County. This test is located on a 480-acre block taken on the basis of seismograph results. Mid-Continent Petroleum Corporation, Sinclair Prairie Oil Company and Slick Urschel Oil Company are participating in the venture.

South Burbank Unit Efforts Are Failure

Tulsa.—Attempts which have been under way for several months to unitize the South Burbank pool of western Osage County, Oklahoma, are said to have failed after such a plan of operation was approved by Secretary Harold L. Ickes. It is understood that abandonment of the plan was due to failure of the operators to agree on value ratios of their properties. The approved development program now governing the pool has less than two weeks to run and it is anticipated that a new plan will provide for the drilling of an additional well to each 40-acre tract. However, since several operators exceeded their drilling quotas as provided in former plans and drilled but did not produce the extra wells, it is not anticipated that a large amount of additional development will be permitted under the new plan .

4,000 Barrels of Binger Oil Sold

Cyril, Okla. — Anderson-Prichard Oil Corporation is reported to have purchased 4000 barrels of oil produced from Denver Producing and Refining Company's Adah Noe 1, NW SW SW 34-10n-10w, deepest producer in the world and now known as the "Binger well." Gravity of the oil is in excess of 50 degrees and so far as is generally known this is the first sale of an appreciable quantity. Trucks are being used to transport the oil from the well to the refinery here. The well is now producing about 70 barrels per day on lift.

Lincoln County

Davenport, Oklahoma. — Stanolind Oil & Gas Company's Cavanaugh 1, SE SE NE 31-15n-5e, wildcat test 2¾ miles west of here in eastern Lincoln County, topped Oswego lime at 3494 feet and Pure sand at 3515 feet. At 3545 feet a drill stem test showed 330 feet of rotary mud and a slight showing of oil and gas. Operators were preparing to core.

Poor Results in Upper Oklahoma City Sands

Oklahoma City. — Indian Territory Illuminating Oil Company seems to have been poorly repaid in its first directional drilling project in the Oklahoma City pool on the basis of production reports from Farley-Fuzzell 2, NW NE NE 23-11n-3w, in the southern portion of the pool. This well was originally completed July 17, 1930, making 8845 barrels in 24 hours from broken sand at 6366 to 6561 feet. In an attempt to utilize most of the old hole in securing production from upper sands, a whipstock was set at 4352 to 4370 feet. The following formations were encountered in the new directed hole: School Land sand, 6255 feet; Mollman sand, 6340 feet; Hammer sand, 6368 feet; and Johnson sand, 6505 to 6530 feet, the total depth. It was making 50 barrels of oil and 50 barrels of water from these formations. Bottom of hole is said to be from 150 to 300 feet away from the surface location.

Oklahoma County

Edmond, Oklahoma. — Gypsy Oil Company's Schock 1, NW SW SW 2-14n-3w, five miles north of here in northwestern Oklahoma County, was drilling below 5655 feet with no formation information released. Nearest production is in the Edmond pool, four miles to the southwest. This test is reported running high.

W. H. Riddle et al staked location during the week for Price 1, SW SE NW 30-14n-3w, one mile north of production in the main portion of the Edmond pool four miles west of here in northwestern Oklahoma County. The new test will be approximately mid-way between the north edge of production and Rapp et al's Price 1, NE NE SW 19-14n-3w, a small Wilcox sand producer completed several months ago. This well appears to be on the north edge of the structure but may be separated from the main pool.

Guthrie, Okla.—The Texas Company's Denny 1, C NE SE 33-17n-4w, in the southern portion of the Crescent pool of western Logan County, further demonstrated the importance of Lower Wilcox sand when it was recompleted during the week for a 24-hour potential of 6764 barrels. Sand was logged from 6218 to 6229 feet, the total depth. This well was originally completed in December, 1933, yielding 4381 barrels from Upper Wilcox sand at 6039 to 6062 feet. Its potential had declined to 2477 barrels.

Fitts Pool Leads Oklahoma New Work

Tulsa.—The Fitts pool of southeastern Pontotoc County carried that area into the new work lead during the past week when 16 first reports were made. Ten scattered starts gave Osage county second position. The remaining new work was distributed rather evenly through 14 additional counties. Noble and Seminole counties had three each; Carter, Creek, Marshall, Okmulgee, and Tulsa counties had two each, and Jefferson, Kiowa, Muskogee, Oklahoma, Pottawatomie and Stephens counties, one each; a state total of 50 compared to 61 during the preceding week.

Of the total of 51 completions, 32 were oil wells with combined initial production of 41,464 barrels, one was a dry gas well with initial volume of 7,500,000 cubic feet, one was an abandoned location and 17 were dry holes. A total of 135,816 feet of drilling were involved in the completions, including 3136 feet in three old wells and 23,180 feet in exploratory tests. Three wildcat discovery wells entered the completion list during the week although they have been producing for several weeks. Notable among these is Denver Producing and Refining Company's Adah Noe 1, NW SW SW 34-10n-10w, drilled to 11,230 feet and plugged back to 10,125 feet from which depth it is yielding at the rate of 70 barrels per day.

Oklahoma Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ATOKA COUNTY—		
H. G. Potts, Nichols 1, sw sw nw 32-2s-9e	*	2710
CADDO COUNTY—		
Denver P&R Co., Noe 1, nw sw sw 34-10n-10w (pb 10,125)	70	11,230
CARTER COUNTY—		
Ben G. Barnett, Lynn 3, se nw ne 31-1s-2w	*	lcn.
COMANCHE COUNTY—		
Ashcraft & Palmer, Palmer 5, se se se nw 28-2n-10w	3	470
CREEK COUNTY—		
Murta et al, Stewart 6, ne sw ne nw 32-17n-12e	*	2717
Keener O&G Co., Seber 1, ne ne nw se 10-17n-7e (pb 1576)	10	1584
Deep Rock Oil Co., Wilson 13, cn½ nw nw se 7-18n-7e	*	2464
JACKSON COUNTY—		
Gypsy, Hensley 1, ne ne nw 10-1n-20w (pb 1400)	10	1858
KAY COUNTY—		
Wentz Oil Corp., Herman 4, cnw nw 8-28n-1e	62	3407
Bay Oil Co. et al, Curtis 1, ne ne nw 23-28n-3e (pb 3105)	*	3184
LINCOLN COUNTY—		
Magnolia, Wilson 1, s½ sw ne se 33-14n-4e	101	3073
LOGAN COUNTY—		
Sinclair Prairie, School Land 1, se se 36-17n-1w (pb 5266)	425	5290
Mid-Continent, Campbell 1, cse ne 33-17n-4w (otd 6180)	1100	6223
MARSHALL COUNTY—		
Batson et al, Lynn 1, nw ne nw nw 36-7s-5e	*	160
MUSKOGEE COUNTY—		
Gillmore et al, Brady 1-A, nw ne ne ne 3-14n-18e	*	1210
Dodson-Ladd et al, Townsite 1, ne ne nw ne 34-15n-18e	*	1058
NOBLE COUNTY—		
Twin State, DeVore 3, sw ne nw 27-22n-2w	324	4934
OKLAHOMA COUNTY—		
Western States Co., Haddix 1, nw sw se ne 22-11n-3w	75	6607
OKMULGEE COUNTY—		
J. E. Wallace, Colbert 15, sw sw nw se 14-14n-14e	10	1017
OSAGE COUNTY—		
J. W. Field, 1-A, ne nw ne se 11-21n-11e	*	2268
Comail Oil Co., 6, nw nw se sw 32-22n-8e	65	1901
E. O. Platter, 5, nw ne se nw 30-22n-9e	3	432
Kewanee Oil Co. 12, ne se ne ne 5-22n-11e (pb 1181)	7	1727
Osage Lease Holding, 1, cnl ne ne 6-22n-11e	12	1180
Finance Oil Co., 1, cwl e½ sw 19-23n-9e (pb 2481)	9	2483
Sinclair Prairie, 7, ne nw sw 15-24n-7e	33	2595
Continental & Gypsy, Farrell 10, sw ne ne 21-24n-7e	434	2630
J. S. Cosden, Inc., 1, sw sw sw sw 34-24n-8e	*	850
Manahan Oil Co. et al, 6, sw sw nw 3-25n-6e	281	2826
Skelly 9, nw nw sw 3-25n-6e	742	2778
Carter, Cook 3, se sw ne 9-25n-6e (pb 2725)	50	2821
PAWNEE COUNTY—		
Leas & Moore, Harrison 1, se se ne sw 35-20n-9e (otd 60)	*	2164
PONTOTOC COUNTY—		
Phillips, Norris 5, nw se sw 25-2n-6e	28,800	4246
Sulmac, Hart 1, ne sw nw 27-5n-6e	125	2800
POTTAWATOMIE COUNTY—		
Westgate Oil Co., Schrader 1, ne nw ne 6-6n-5e	1395	4181
Schrader 3, se nw nw ne 6-6n-5e	504	4211
Newt Barrett, Brandenburg 1, sw ne se 3-7n-4e (pb 3525)	*	4042
Amerada & Stanolind, Brooks 1, cnw sw 2-8n-4e (pb 4132)	76	4137
Stanolind, Sauter 1, ne ne se 31-11n-4e (pb 4405)	58	5562
SEMINOLE COUNTY—		
Wofford Drilling Co. et al, Thomas 1, nw nw se 8-6n-7e	1140	3950
Champlin, See 1, se ne se 30-7n-8e	2545	4185
See 7, sw ne se 30-7n-8e	2928	4225
STEPHENS COUNTY—		
Alspaugho et al, Glaze 1, sw sw sw nw 16-1n-8w	¶7½	2419
Lesh Brothers, Crosby 3, sw se sw sw 23-1s-5w	6	690
TULSA COUNTY—		
Basinger, Depriess 1, ne ne ne ne 35-17n-12e (otd 1334)	61	2323
Epplyer, Grayson 1, ne ne ne ne 1-17n-13e	*	1570
Mechling, McIntosh 4, sw sw se nw 13-17n-14e	*	1883
Castelo et al, Boone 1-A, ne ne ne nw 24-18n-13e	*	1575
Detmer, McIntosh 1, se se nw 4-18n-14e	*	1430
Sheridan Oil Co., Berryhill 12, sw se sw nw 21-19n-11e	*	2240
Flynn et al, Anthis 1, nw nw nw 32-19n-10e	*	2410

*Failures; †Junked; ¶Million cu. ft. gas.

Wildcat Activity in Western Kansas Receive Big Increase

Wichita, Kansas.—Seven wildcat locations were staked in Kansas during the past week. Harvey Blair and Willis Hartman added to their reputation as wildcat kings with two more exploratory ventures in Russell County, where their new discovery in Section 2-14s-15w is rated as the largest well in the state. Their Claussen 1, SE NE SW 34-12s-14w, is four and one-half miles north of production in the Russell pool and Rexroot 1, NE NW NW 31-14s-14w, is two and one-half miles southeast of the Neidenthal pool, which was discovered by these operators. The third new wildcat operation for Russell during the week was announced by Buffalo Oil Company at Kunz 1, NE NE SW 19-14s-15w, four miles south of the Gorman pool in the western portion of the county.

Derby Oil Company and Penwest Oil Company started digging cellar for Bartholomew 1, NW NW NW 8-27s-4w, a wildcat operation 26 miles west in western Sedgwick County. A deal with Stanolind Oil & Gas Company and Amerada Petroleum Corporation made the test possible.

Lario Oil & Gas Company and Alex McCoy staked location for Doloeck 1, NE NW NE 13-16s-12w, three miles east of the newly discovered Beaver pool in northeastern Barton County. The Beaver pool has production from the Gorman sand and Siliceous lime.

Sunray Oil Company is reported to have taken over a 1600-acre block west of Sperling, in northwestern Harvey County. Wood Bros., Goering Bros., and Imo Oil & Gas Company were the original owners of the acreage. Location was immediately staked for Sperling 1, NE SE NE 23-22s-2w, north offset to the discovery well which made 1600 barrels when completed a few months ago but has now declined to less than 800 barrels.

Kansas Gets 29 New Field Operations

Wichita, Kansas. — New work in Kansas was rather evenly distributed over the state with 15 counties entering the first report list during the week. Butler and Russell counties were tied for the lead with four each; Greenwood and Woodson counties had three each; Barton, Ellsworth, McPherson and Rice counties, two each; and Chase, Ellis, Harvey, Rush, Scott, Sedgwick and Stafford counties one each; a state total of 29 compared to 22 the preceding week.

Seventeen oil wells added 12,541 barrels to the cumulative initial produc-

tion for the year, three locations were abandoned, one test spudded and abandoned, one cellar abandoned, one ponds abandoned and six dry holes, a total of 29.

As of April 20, 1935, Kansas had 19,624 producing wells rated at 482,382 barrels daily potential, the highest figure the state has reported in several years despite the fact that water has been rapidly encroaching on Hunton lime and production from that formation declining rapidly in the big Burrton pool of northeastern Reno County.

Kansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BUTLER COUNTY—		
Soco Oil Co., McGinnis 1, ne se ne 9-27s-6e	lcn.	abd.
COWLEY COUNTY—		
Continental & Patton, Higgenbotham 2, sw nw sw 29-31s-6e	150	2942
ELK COUNTY—		
Clay Pet. Co., Shambaugh 1, cne se 20-28s-9e	*	2870
ELLSWORTH COUNTY—		
Pryor & Lockhart et al, Gregory 1, se se se 19-16s-8w	*	3386
GREENWOOD COUNTY—		
Houston Oil Co., Berry 4, nw nw se 28-23s-13e	25	1740
HARVEY COUNTY—		
Marathon, Duerkson 3, se sw ne 19-22s-3w (otd 3454)	3	3475
H. H. & S. Oil Co., Buller 1, ne ne se 31-23s-2w	*	....
McPHERSON COUNTY—		
Roth & Farrout, Swanson 4, sw sw ne 13-19s-3w	¶2-373	3008
Lario Oil & Gas Co. et al, Base 1, sw sw sw 22-20s-2w	*	3576
RENO COUNTY—		
Bradley Oil Co., Olmstead 1, sw sw sw 22-22s-7w	*	....
Derby Oil Co., Ackley 5, nw sw se 14-23s-4w	*	520
T. M. Deal, McElwain 5, nw se se 34-23s-4w	lcn.	abd.
Olson & Shell, England 4, sw sw se 34-23s-4w	2101	3604
Dickey & I.T.I.O. Co., Baughman 2, nw nw ne 3-24s-4w	1300	3599
RICE COUNTY—		
Sinclair Prairie, Volkland 6, nw se se 20-19s-9w	1205	3245
Jones, Murphy 1, sw sw se 21-19s 9w	lcn.	abd.
W. S. Fees, Reiss 1, nw nw ne 24-19s-9w	*	lcn.
Empire, Grove 3, se sw ne 29-19s-9w	1365	3240
Grove 4, nw sw ne 29-19s-9w	1324	3230
Gypsy, Steckel 2, cw½ se nw 31-19s-10w	1433	3308
Christopher 9, sw se ne 6-20s-9w	552	3265
Malone 5, ne se nw 18-20s-9w	1489	3307
Texas, S. W. Grove 8, se se ne 29-19s-9w	616	3216
RUSSELL COUNTY—		
Hartman & Blair, Hildebrandt 1, nw ne sw 12-14s-14w	*	3250
SALINE COUNTY—		
Dieter et al, Herrington 1, ne nw se 3-13s-1w	*	3289
SEDGWICK COUNTY—		
Shawver, Russell 5, sw sw se 17-28s-1e	137	3120
Kilgore & Hansen, Owens 1, se sw sw ne 20-28s-1e	189	3113
Magnolia, Robbins 7, nw ne nw se 20-28s-1e	267	3108
WOODSON COUNTY—		
Braden et al, Scott 5, ce½ ne sw 13-23s-14e	12	1624

*Failures; †Junked; ¶Million cu. ft. gas.

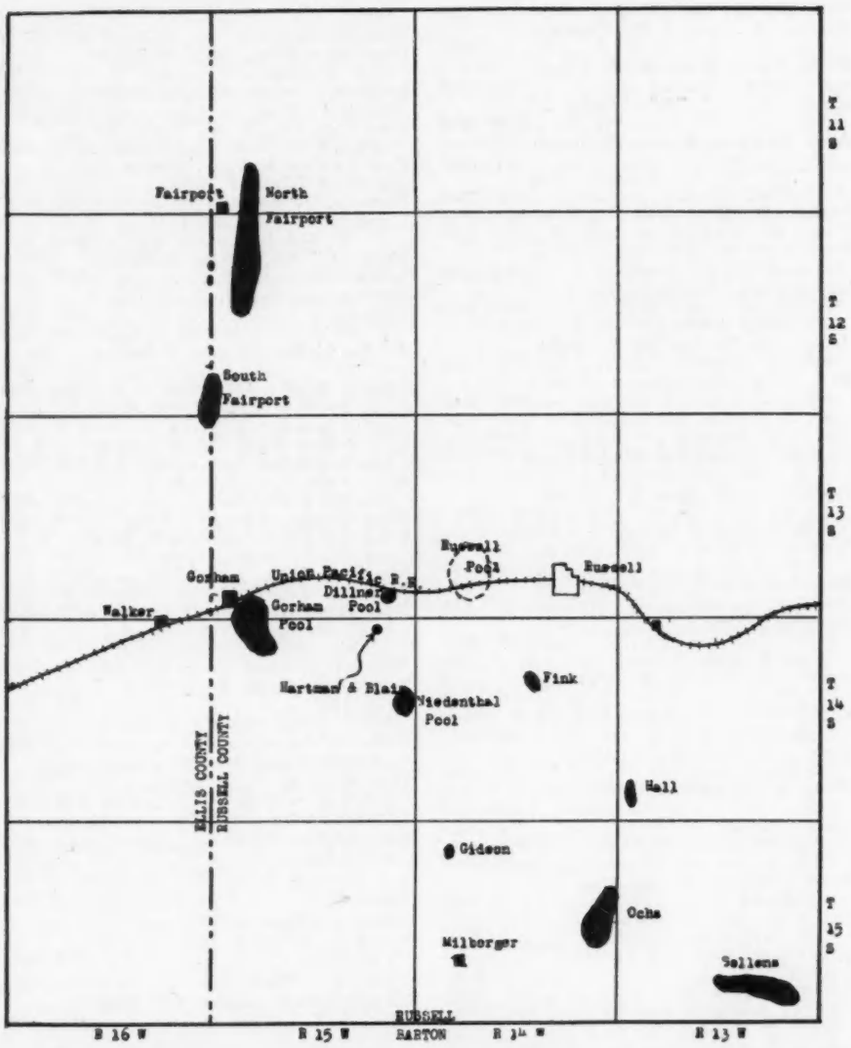
Topeka Lime Well Is Important Kansas Strike

Russell, Kans. — Hartman and Blair's Rouback 1, SE SE NW 2-14s-15w, in the Gorham area of western Russell County, proved itself as probably one of the most important Kansas discoveries of several years when it yielded 4076 barrels in 24 hours during the past week. The new well was opened to capacity for 6½ hours and pinched during the remainder of the 24-hour period due to lack of sufficient storage facilities. Production is from Topeka lime at 2790 to 2795 feet, the first commercial production obtained from this horizon in Kansas. Oil was being moved by a fleet of trucks to Falcon Refinery, Incorporated's plant at Great Bend in southern Barton County.

Locations had been staked for the following: Gypsy Oil Company's Pierce 1, NW NW SE 2-14s-15w, southeast diagonal offset; Hartman and Blair's Roebuck B-1, NE NE NW 2-14s-15w, three locations to the north; the same operators' Baier 1, SE SW SE 35-13s-15w, two locations east and one half mile to the north; and Shaffer, Pryor and Lockhart's Cram 1, NE NE SE 11-14s-15w, one and one quarter miles to the southeast.

Stafford County

Hudson, Kansas.—Empire Oil & Refining Company has staked location for No. 1, NE NE NW 5-22s-11w, six and one-half miles northeast of here in northeastern Stafford County. Nearest production is in the Richardson pool, six miles to the southwest. The new wildcat is slightly over two miles northwest of Sinclair Prairie Oil Company's Boucher 1, NE NE NE 9-22s-11w, completed October 14, 1930, as a dry hole in siliceous lime at 3587 feet. It is not anticipated that the Empire test will have to go below 3600 feet to find siliceous.



Arrow points to Hartman & Blair's Rouback 1, Topeka Lime discovery in Western Russell County, Kansas.

East Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Arcadia Ref. Co., J. R. Green 11-A (55.56-ac)	7000	3736
B. G. Byers & Wolfe, L. Jackson 3 (25-ac)	8800	3802
J. L. Collins & Co., Dan Kelly 4 (22.1-ac)	4500	3642
A. S. Genecov & Roosth, Lanham 1	1200	3777
Great State Oil Corp., E. E. Fisher-Smith 1 (5.18-ac)	480	3651
Gulf, T. B. Cashen 12 (127.71-ac.	9000	3782
E. E. Thrash 11 (83.56-ac)	7800	3721
HB&W Oil Co. (was Jaycee Oil Co.), Stroud 5	480	3651
Humble, G. Alexander 7 (156.01-ac)	*	3740
Geo. Alexander 8 (156.01-ac)	*	3745
Geo. Alexander 9 (156.01-ac)	*	3746
Odell Blackwell 9 (74.4-ac)	10,000	3685
Ida Holt 10-B (91.45-ac)	12,000	3775
S. A. Plowman 37-A (228½-ac).	5000	3743
J. H. Silvey 16-A (200.2-ac)	9600	3733
Virginia Turner 13-A (126.26-ac)	12,000	3743
Hunt Prod. Co., W. R. Fair 19-A (136.72-ac)	8800	3641
Neal Turner 3 (24.8-ac)	10,000	3703
Illinois Oil Co., Mayfield 29 (197.1-ac)	5400	3838
Magnolia, A. Perkins 9 (77.06-ac).	5000	3650
Ortiz Oil Co., C. C. Cooper 1	*	3653
Overton Ref. Co., I. R. Thrash 1 (2.29-ac)	8000	3806
B. H. Rogers et al, M. A. Thrash 2 (2.8-ac)	7000	3780
Sinclair Prairie, Dora Wright 29 (152.1-ac)	9500	3745
A. L. Slaughter & Metcalf, Frederick 2 (2-ac)	700	3635
Stanolind, H. C. Maxwell 18-A (108.52-ac)	8000	3777
Sun, R. Jeff Hendon 16 (119.41-ac)	480	3554
Texas, M. Blackwell 21 (100-ac).	6300	3684
Venable Oil Co.-McClanahan, J. A. Birdwell 20 (147.04-ac)	11,000	3641
Weaver-Perry Oil Corp., T. O. Wright 10 (12-ac)	7500	3695
KILGORE AREA—		
Atlantic O. P. Co., W. J. Brightwell 18 (96.4-ac)	9500	3608
Gulf, H. C. Alexander 29 (209.01-ac)	6800	3566
S. G. Andrews 8 (63.23-ac)	8000	3606
R. N. Brightwell 7 (50-ac)	8000	3601
C. M. Jernigan 12 (88.82-ac)	8500	3625
J. B. Wilson 13 (92.97-ac)	8500	3574
Humble, L. D. Crim 157 (914.51-ac)	9500	3697
S. S. Laird 31-A (230-ac)	6000	3666
Invincible Oil Co., Will Williams 7 (14-ac)	12,000	3580
John Luttes et al, M. Register 2-A (32½-ac)	5600	3682
Magnolia, Ben Laird 12 (82½-ac)	10,500	3631
M. B. Hughey 10 (80-ac)	9300	3540
Navarro Oil Co., R. N. Brightwell 23 (113.08-ac)	6000	3638
S. N. Rowan et al, Walter Roberson 1 (4.15-ac)	480	3672
Royal Pet. Corp., F. A. Taylor 2 (40-ac)	500	3644
Shell, M. H. Bivins 13-A (113.4-ac)	8600	3618
Rosa Russell 17 (126-ac)	8500	3683
J. B. Watson 40 (385.2-ac)	9000	3639
J. B. Watson 56 (385.2-ac)	8200	3649
Sinclair Prairie, A. A. King 2-C (127½-ac)	18	3485
Sun, J. R. Beall 19 (180-ac)	8800	3600
E. L. Walker 2 (320-ac)	600	3688
Tide Water, Tom Bell 14 (60.8-ac)	7000	3659
J. S. King 16 (81.18-ac)	8400	3603
W. P. Moore 14 (135-ac)	9000	3662
Jack S. Williams et al, R. F. Osburne 1 (1-ac)	5600	3567
Wright-Smith Oil Co., S. E. Harris 2 (72/100-ac)	6000	3610
LONGVIEW AREA—		
Amerada, Catie Bumpas 9 (98.3-ac)	9600	3584
Cont'l State Bank 10 (98.31-ac).	9000	3605
Cont'l State Bank 11 (98.31-ac).	7500	3630
L. R. Hearne 10 (108.ac)	6500	3535
Allen Tooke 8 (60-ac)	10,000	3541
Arkansas F. O. Co., F. K. Lathrop 12-C (101.2-ac)	8500	3617
J. C. McKinley 7-B (69.01-ac).	9500	3612
L. E. Orms 9 (56.44-ac)	10,000	3562
Atlantic, J. C. Judge 67 (455-ac).	9600	3528
J. C. Judge 76 (455-ac)	12,000	3527
Atlantic-Sun, Wm. Anderson 13 (83.27-ac)	11,000	3500
M. Hays 62 (448-ac)	12,000	3554
Steven H. Christensen et al, Otto Staerker 1 (5.3-ac)	1000	3578
R. Davisson et al, J. H. Sheppard 1 (81/100-ac)	5600	3690
Empire, A. Green 11 (67.21-ac)	9600	3636
Gibson Oil Corp., W. F. Smith 6 (50-ac)	500	3686
Guiberson Oil Co., Stuckey-Thrasher 10 (40-ac)	9400	3593
Gulf, Tom Clemmons 9 (55.13-ac).	8000	3660
J. C. Judge 64 (518.3-ac)	5600	3509
J. C. Judge 71 (518.3-ac)	5800	3533
Humble, T. B. Harris 21 (175.18-ac)	7000	3524
M. Killingsworth 12 (99.7-ac).	9600	3614
Jones & O'Brien, Inc., McHaney-Loeb 6 (39.82-ac)	9200	3570
Locke & Nathan Oil Co., W. F. Smith 1 (31-ac)	500	3707
Long Drlg. Co., W. W. Owens 9-A (208.-ac)	600	3632
C. H. Lyons & N. F. Neeley, E. O'Byrne-Midget 2 (20-ac)	6500	3704
Magnolia, H. Fenton 4 (50-ac)	7500	3737
Hobart Keys 11 (58.96-ac)	10,000	3559
W. R. Nicholson 6 (49.16-ac)	8800	3670
Mudge Oil Co., J. D. Richardson 13-A (92½-ac)	9400	3743
Navarro Oil Co., T. B. Harris 9 (80-ac)	4500	3531
T. B. Harris 10 (80-ac)	4500	3527
B. F. Phillips et al, Brazzil 1 (¼-ac)	7000	3624
Carrie Brooks 4 (18.07-ac)	6500	3593
N. P. Powell et al, C. Wilhite 4 (10-ac)	9700	3712
J. I. Roberts Prod. Co., A. L. Jenkins 6 (37.7-ac)	9600	3657
Selby O&G Co.-Lewis Prod. Co., Snavely 8 (118.3-ac)	6000	3570
Sklar Oil Co., O'Byrne 1 (20-ac).	†	3480
Southland Drlg. Co.-United E&W Oil Co., O'Byrne 22 (304-ac)	750	3666
Sun, S. C. Salter 1-B (27-ac)	1500	3776
Texas, D. Culpepper 2 (61.57-ac).	120	3725
Tide Water, B. Moore 11 (90-ac).	8000	3557
J. H. Sheppard 13 (114.36-ac)	8300	3619
J. K. Wadley et al, Salter-Brawley 1 (50-ac)	*	3812
Yount Lee, G. E. Fenton 8-A (77.64-ac)	7800	3603
S. G. & M. Smith 10-C (56.65-ac)	8000	3562
ANDERSON COUNTY (Cayuga Field)—		
Tide Water & Texas Seaboard, T. Royall & A. Cone 1-B (49.73-ac)	2500	4099
VAN ZANDT COUNTY (Van Field)—		
Pure Oil Co., Frank Blackstock 6.	3000	2905
CHEROKEE COUNTY—		
T. J. Wood & Young, New Birmingham 3	†	2495
HENDERSON COUNTY—		
Toddie L. Wynne & LaRue, G. W. Forester 1	*	4367
MORRIS COUNTY—		
Marydun O&G Co.-Sterling O&R Co., T. C. Conner 1	*	4206
VAN ZANDT COUNTY—		
Monterey Oil Co., S. E. Cox-Eaton 1	*	4760

*Failures; †Junked; ¶Million cu. ft. gas.

Five Dry Holes Completed In East Texas Last Week

Tyler, Texas.—Recovering from temporary slump in completions experienced the previous week, the East Texas field has resumed its normal output of new wells by adding 101 completions the past week. Five dry holes and one junked test were included in the total, while eight of the oil wells failed to register natural flow and will be pumped.

Three of the dry holes were drilled simultaneously on the same lease by Humble Oil & Refining Company and on locations considered virtually proved for oil production based upon the performance of nearby tests. This company's Geo. Alexander 7, 8 and 9, situated in the Thos. H. Smith Survey, near east edge of the Joiner area, failed to encounter sand in drilling into Georgetown lime near the 3740-foot level, and were ordered plugged. All were situated east of the railroad.

Irregular sand conditions have been found to exist in the vicinity of the Delta Drilling Company's Hamilton 1, Wm. King Survey, Upshur County, which recently extended the field to the northwest. J. K. Wadley, Shreveport, et al's M. C. Salter-Brawley 1, SEc 50-acre lease and a west offset to the outpost producer, topped the sand at 3788 feet, or 3324 feet below sea level, and was abandoned at 3812 feet after yielding small show of oil with salt water. Wadley and associates have drilled 11 dry holes in Upshur County along the northwest flank of the main field and in the Jamestown area.

Delta Drilling Company's M. C. Salter 1, situated on 51-acre lease between the company's outpost producer and the field, topped sand at 3764 feet, or 3307 feet below sea level, and after taking in four feet shut down to cement casing, with promise of a good producer. L. E. Merritt, Longview, et al's L. Brawley 1, situated on south end of 9.4-acre lease, was showing for a producer in sand at 3796-3801 feet. Sklar Oil Company's O'Byrne 1, SEc 20-acre lease, was junked at 3480 feet, and skid rig 30 feet to the east. Vera Oil Company's H. B. Owens 3, NEc 50-acre lease, Wm. King Survey, swabbed salt water when tested in sand at 3803 feet, or 3328 feet sub sea, while its Owens 4, SEc lease, blew out at 3805 feet, and flowed unrestrained for about five hours, indicating a good producer in the making. Red Irion Drilling Company's Brawley 1, situated on a small site in the King Survey, tested salt water and oil in sand at 3725-32 feet.

John Hooser et al's O. J. Phillips 1,

SEc of 100-acre lease, P. W. Whitestone and L. Henderson Survey, situated about one half-mile northwest of production in Upshur County, has cemented casing at 3650 feet, with the hole bottomed at 3675 feet, according to reports.

Short penetration of the Woodbine sand is being practiced by operators more extensively as result of the spread of the water table. Completions the past week listed 15 wells that varied from one to five feet in the producing horizon, including four that took in the minimum, while four others quit after drilling two feet in. Yount-Lee Oil Company, which operates exclusively in the northeast portion of the Longview area and generally isolated from water, has adhered to a policy of penetrating the sand 20 feet with all wells, except those on the extreme east side that required a greater penetration to make producers. Sun Oil Company's E. L. Walker 2, NEc of 394.65-acre lease, Wm. W. Friar Survey, situated on west edge of production in Gregg County, gauged 25 barrels hourly from one foot of sand topped at 3687 feet, or 3323 feet below sea level. The company's first well on this lease was completed in August, 1931, making 25 percent water at a sub-sea depth of 3328 feet. It was placed on pump the following December. The hole was recently plugged back to 3709 feet, or 3319 feet sub sea, while pumping one barrel of oil and 11 barrels water per hour. The volume of fluid was cut to 24 barrels daily, with 50 percent water showing.

East Texas March Excess Output Is Low

Kilgore, Texas.—Accounted for excess crude production in the East Texas field dropped to a new low level for the year in averaging 17,187 barrels daily during March, according to monthly statement released by Harry A. Miles, chief enforcement officer for the railroad commission. The average for January amounted to 20,835 barrels daily, while overproduction in February averaged 20,012 barrels daily.

Allowable production for the field during March was fixed at 13,904,733 barrels, or an average of 448,540 barrels daily, with 16,583 completed wells listed at the end of the month. Pipe lines were credited with having transported 13,835,875 barrels from the field during March, while local refineries processed 1,056,173 barrels, according to the commission's report. Tank car shipments of miscellaneous oil products declined to 4658 cars, or an average of 150 cars daily during March, as compared to 6244 car loadings in February and 6411 cars in January.

Anderson County Wildcat Finds Favorable Conditions

Palestine.—Registering a favorable structural position on the upper Chalk markers the wildcat test of Hunt Production Company and Sun Oil Company on the Alice Scott tract, Jas. Crawford Survey, southern Anderson County, had progressed to the 4700-foot level late last week. Pecan Chalk was logged at 4450-4650 feet, with an elevation of 411 feet. It is about 1000 feet southeast of the first of two tests drilled last year by Byrd and Frost, Inc., et al, who encountered 473 feet of Pecan Chalk and cut a fault near the Woodbine sand zone topped at 5455 feet with considerable live oil showing with water in drilling their Scott 1. Drilling of the third test is predicated on the theory that a narrow faulted structure capable of producing will be found by drilling between the first two failures.

Gulf Production Company's Rogers 1, Daniel Parker Survey, southwestern Anderson County wildcat, yielded salt water when formation tester was used on lower Woodbine at 5750-5765 feet, and will probably be abandoned.

Blackwell Oil & Gas Company and Ike Rudman have made location for a test to be drilled about 1½ miles southeast of nearest production in the Van field and will drill a Woodbine sand test in the southeast part of the Malone 100-acre lease, J. Blach Survey. Completion of a second oil producer in the north extension of the Cayuga field, Anderson County, was scheduled for the week end with Roeser-Pendleton, Inc.'s Wathen 1, south offset to the extension well, flowing and swabbing into pits while cleaning the hole of rotary fluid at 4091 feet, or 3763 feet below sea level. Clark and Cowden Drilling Corporation's Barton 1, situated northeast of the field proper, was logging oil saturated sand while coring in Woodbine at 4053 feet, with an elevation of 326 feet.

Renewal of development in the Buffalo district, Leon County, where Shell Petroleum Corporation and associates in a unit program have three shutin gassers completed from the Woodbine sand zone, will be attempted by Killough & Tucker. Location has been made on the J. W. Lee tract, Jacob Burleson Survey, about 4½ miles southeast of Keechi, and several miles north by east of Shell et al's gasser on the G. W. Lee tract, Wm. Cooper Survey. Edson Petroleum Company and W. C. Windsor donated acreage for the drilling site. Tide Water Oil Company and Texas Seaboard Oil Company own leases on considerable acreage in the immediate area.

J. W. Kemp Company has moved in rig to drill a test about 2½ miles north of Thelma, Limestone County, having made location on the Vol DeLong 220-acre tract, Pedro Varella Survey, near

Stored Oil Disposition in East Texas Awaiting Court Action

Kilgore, Texas.—Disposition of more than 1,159,000 barrels of crude, refined and semi-refined oil products held in earthen pits and steel storage by independents in the East Texas field is awaiting action of state and federal courts to decide if these products can be marketed via pipe lines or tank cars in defiance of objections raised by the tender boards. State and federal enforcement agencies have labeled these stocks as being derived from illegally produced oil.

Unless given relief by the courts the owners of these stocks will not realize the huge profits anticipated. An adverse court decision will restrict the market for these stocks to tank truck sales and deliveries after same are converted into finished products. The tank truck market is depressed because of dumping practices of plants processing the current supply of illicit crude, and will not average 50 percent of the return attainable from properly tendered products of equal specifications.

Stocks of crude and miscellaneous products listed in court petitions now pending are estimated as follows, but do not include all contraband products held in the field:

PRODUCTS—	Barrels
Fuel oil	242,720
Topped crude	213,694
Crude tops	175,496
Charging stocks	160,000
Gasoline	139,966
Crude oil	119,765
Creek oil	53,000
Reclaimed oil	28,405
Gas oil	13,846
Miscellaneous	12,112
TOTALS	1,159,004

small gasser recently drilled by David J. Crawford et al.

The Ore City area, Upshur County, is to receive another test. Thos. D. Humphrey, Tyler, has rigged up to drill Claude Nations 1, near NEc of 156.28-acre lease, Robertson Asher Survey, about 1½ miles north of the town.

Three wildcats were dropped within the past week as failures. In the La-Rue salt dome area, Henderson County, Toddie L. Wynne et al's Forester 1, David Cherry Survey, logged salt water in Woodbine sand at 4290-4367 feet. The southern Van Zandt County test of Monterey Oil Company, Wichita Falls, on the S. E. Cox 67-acre tract, J. Wilson Survey, quit in Eagleford shale at 4760 feet. In Morris County, the Marydun Oil & Gas Company and Sterling Oil & Gas Company's T. C. Conner 1, M. W. Mathews Survey, quit at 4206 feet after topping the Woodbine section at 3960 feet, with an elevation of 294 feet.

Cayuga Spacing Rules Are Revised

Austin, Texas.—The Texas Railroad Commission has ordered revision of the spacing rules in the Cayuga field, Anderson County, to permit the drilling of separately owned tracts of less than 20 acres. The new rule became effective on April 29.

The spacing rule still provides that wells shall be spaced 466 feet from lease lines and 933 feet apart, or in the center of 20-acre units, but clauses of the rule have been eliminated which forbade the drilling of a well on any tract containing less than 20 acres.

At a hearing held in Austin recently, the holders of larger leases expressed the fear that if the rule were revised, some leases would be subdivided to obtain additional drill sites.

As a concession to their request for some regulation preventing this, the commission ordered that "In applying this rule (allowing drilling on smaller tracts as exceptions to the regular spacing rule) the general order of the commission with relation to subdivision of properties shall be observed."

The larger holders had sought to have included that the commission would recognize no subdivision made since the original spacing regulation was issued in 1919, which regulation they contended the statutes had upheld.

The smaller lease holders expressed the opinion that the drilling of these smaller tracts would result in a revision of the current method of allocation on the acreage basis. Some potential plan will probably be advocated.

World's Deepest Test Has Reached 12,552 Feet

San Angelo, Texas.—Averaging 10 feet of new hole daily for the past two weeks, Gulf Production Company's J. T. McElroy 103, Upton County record depth well, had progressed to the 12,552 feet late last week. The company is using four rotary crews, each working six-hour shifts, and is cutting a 6 11/16-inch diameter hole. The well was logging dark gray lime formation at the above depth. Cores are taken at regular intervals to detect any change of formation. The company is seeking production in the Ellenberger member of the Ordovician lime series, the original goal that the test was drilled for.

Rotary rig has been moved in to continue drilling on Gulf Production Company's W. N. Waddell et al 1, western Crane County projected 10,000-foot, or Ellenberger lime test, after driling to 4595 feet with standard tools. In northeastern Upton County, Humble Oil & Refining Company's L. W. Pollok 1 has been temporarily halted by frozen drill pipe at 4940 feet.

Skelly Oil Company et al's University-Grayson 1-D, southern Reagan County, failure in the Ellenberger lime, has been plugged back from salt water at 9967 feet to try and complete as an oil producer in the 3100-foot lime, regular pay zone for the area. The Glasscock County deep test of Loffland Brothers, John I. Moore et al on the L. S. McDowell land is slated to resume drilling from its present depth of 9946 feet. It has been showing a small volume of oil and gas from lime below the 9500-foot level, tentatively identified as the lower Pennsylvanian.

Paul C. Teas et al are preparing to drill a second deep test in Sutton County, having made location for G. S. Allison 1 in the SW¼ Section 49, Block "A", GWT&P Ry. Survey. Teas et al's C. E. Mower 1, C NE SW Section 39, Block 5, TW&NG Ry. Survey, is scheduled to deepen after completing original contract at 4757 feet, supposedly 237 feet below the top of the Ellenberger lime.

West Central Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BROWN COUNTY—		
Will Ahlausen et al, Frank Guthrie 1	*	666
E. & N. J. Henderson 1	*	472
Sher-Ritt Oil Co., Densiman 4-A	35	1182
H. H. Simon et al, W. Tungate 1	30	1900
CALLAHAN COUNTY—		
Drew Beams & Humble, J. F. Dyer 1	*	1340
M. Lorenzen et al, Dr. F. E. Clark 1	*	4205
Ungren & Frazier, I. N. Jackson 6-C	10	1223
J. E. Wright et al, V. F. Jones 1	*	1432
COLEMAN COUNTY—		
W. D. Brookover et al, E. W. Gill 1	*	900
Eppenauer Drlg. Co., J. R. Banister 1	50	1884
D. C. Nystal et al, J. D. Holt 1	*	890
BURNETT COUNTY—		
H. T. McGee et al, Early 1	*	790
EASTLAND COUNTY—		
Conklin et a l, Mrs. J. C. Leazer 1	10	2806
Lone Star Gas Co., J. G. Boggs 1	100	3436
E. E. Van Eman et al, Neil Pippin 1	*	590
McCULLOCH COUNTY—		
J. B. Miller et al, J. Black 1	*	1007
PALO PINTO COUNTY—		
Nelson Oil Synd., Rogers 1	¶8 1/3	3077
SHACKELFORD COUNTY—		
Anderson & Blocker, G. R. Davis 1	*	1720
Charter Oil Co., N. M. Mills 1	*	1636
Hoffman & Page Co., Morris-Buie 2	50	1619
Reliance O&R Co., G. R. Davis 3	50	1620
W. G. Rhodes et al, J. Williams 1	*	1688
Roeser-Pendleton-Conoco, W. I. Cook 54-A, Sec. 61	†	650
Wenona Oil Co., T. McCasland 5	7	751

*Failures; †Junked; ¶Million cu. ft. gas.

Week's Completions in North Texas Shallow

Wichita Falls, Texas.—Failures predominated among the 35 completions recorded the past week in North Texas. All completions were less than 1800 feet in depth, and only four were drilled by major companies. There were 19 dry holes, and an aggregate of 2203 barrels of new production was added by the 16 flowing and pumping producers completed within the period.

Shackelford County Has Busy Period Ahead

Eastland, Texas.—Fields in West Central Texas added 342 barrels of oil and 10,750,000 feet of gas production through the completion of nine oil wells and a gasser. There were also 13 dry holes and a junked test listed as completions, making a total of 24 for the week.

First producer of any consequence completed in Eastland County this year was added by Lone Star Gas Company in developing a flow of 100 barrels of oil and 2,500,000 feet of gas,

registering 980 pounds rock pressure, from J. G. Boggs 1 with production from broken lime and sand at 3396-3436 feet.

Shackelford County contributed seven completions, although only three were producers, and is destined to be the most active section in the district for some weeks hence as result of a large volume of development work being launched in the west portion.

San Antonio, Texas.—O. W. Killam's W. D. Wade 5, Sandia field, Jim Wells County, failed to pick up the sand encountered in Wade 4 at 4022-28 feet. At last reports, it was down 4200 feet. This test is 1250 feet southwest of Wade 4, which several weeks ago showed for an oil producer at the above level, but which was abandoned after turning to salt water.

North Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
L. T. Burns et al, B. H. York 4, sec 1583	*	1409
Dobbs & Kunkel, R. H. Kunkel 1, blk 47	*	1478
Fain-McGaha Oil Corp., Wilson-McCrory 1-B, blk 41	*	1603
FHE Oil Co., F. Brazina 2, sec 2410	90	1445
L. E. Graves et al, W. O. Davis 1, sec 65	*	1378
W. T. Hutchinson et al, Abercrombie 1	*	1555
C. B. Long et al, Logan 14, blk 23	13	1167
Perkins-Cullum Oil Co., Falls 165, blk 6	200	1175
Falls 166, blk 19	20	1094
Ray & Staniforth, J. J. Perkins 4, sec 10	200	1606
COOKE COUNTY—		
Pet. Producers Co., Andress 7	900	1207
W. F. Russell et al, N. Piott 1	50	722
E. J. Ruwaldt et al, Andress 5	*	1601
JACK COUNTY—		
Bissey et al, Brannon Smith 2	*	340
G. A. Erickson et al, C. C. Calvin 1	*	610
Cecil Roberts et al, W. L. Patton 1	*	810
P. J. Rowden et al, H. R. Bloodworth 1	*	660
MONTAGUE COUNTY—		
Texas, S. E. O'Neal 1	*	1800
WICHITA COUNTY—		
Blair & Schlaffke Oil Co., W. B. Honaker 3	40	1070
Bridwell Oil Co., First Nat'l Bank 8, sec 28	25	1053
L. T. Burns et al, T. F. Mitchell 17, blk 7	4	803
T. F. Mitchell 18, blk 7	10	1329
Coppock & Coleman, F. E. Hill 1	*	850
Humble, Wichita-Taylor 31, blk 81	8	839
King Royalty Co. et al, Waggoner Est. 4-H, sec 2	460	1963
Rathke Oil Co., T. L. Burnett 1, sec 4	*	541
Texas, First Nat'l Bank 20	3	472
Waggoner Ref. Co., Waggoner Est. 4-X, sec 2	140	1581
YOUNG COUNTY—		
P. Atchley & F. E. Butler, J. P. Atchley 1, sec 226	*	1003
Pet. Producers Co., Graham 14, sec 2249	*	690
Graham 15, sec 2249	*	691
Rathke Oil Co., H. O. Prideaux 2	*	616
J. C. Roby et al, J. L. Lemond 1	*	750
Tebay & Leberman, H. Leberman 1, sec 221	*	1015
Texas, Finch 7-B, sec 40	40	663

*Failures; †Junked; ¶Million cu. ft. gas.

Recent Discoveries in Winkler County Cause Active Drilling

San Angelo, Texas.—Winkler County is advancing to the front as one of the most active drilling centers in West Texas. Activity is centered around three separate areas along a southeast to northwest trend parallel to the east flank of the Hendrick field and on a line between the Scarborough-Llano and Gulf-O'Brien areas. An interval of about 24 miles separates the latter two fields, and within the past nine months three oil pools have been uncovered in a direct trend between the original fields. Oil production is developed from sandy-lime formation averaging about 3000 feet in depth, with high-presssure gas production in the brown lime formation topped near the 2500-foot level. Independents have a large portion of the acreage along this trend.

The Sayre field, situated about three miles southeast of the Scarborough-Llano field, and in the northeast portion of Block B-26, P. L. S. Survey, aroused interest in this Winkler County trend last August when Sayre Oil Company, Midland, Texas, scored a 564-barrel flowing well in completing J. F. Howe 1, NWc N½ SW¼ Section 12, from sandy lime at 2820-75 feet. Completions have since been increased to 13 oil wells and one gasser, which was junked above the oil horizon. Operations are underway on several other tests, including two outpost locations to the southwest by Roy A. Westbrook, Fort Worth, discovered of the Hendrick field. Magnolia Petroleum Company and Texas Pacific Coal & Oil Company, owners of big tracts on the north end of the field, have a continuous development program scheduled. Majority of the completions have been of similar caliber as the discovery well, although Magnolia Petroleum Company's J. B. Walton 6 recently responded to a shot of nitro at 2966 feet, with a flow of 1498 barrels as compared to a natural flow of 82 barrels daily immediately prior to the shot.

In the south portion of Winkler County the Halley area was uncovered also last August when Skelly Oil Company's S. M. Halley 1, SWc NE¼ Section 25, Block B-11, P. S. L. Survey, gauged 387 barrels of 31.3 gravity oil flowing natural from sandy-lime at 3105-3112 feet, or 387 feet below sea level. The company's second test, a north offset, developed 2500 feet of oil in hole at 2907 feet, and in drilling to 3090 feet the gas production increased to about 30,000,000 cubic feet, causing tools to be lost in the hole. Top of lime was logged in the second test at 2400 feet, or about 40 feet higher than the discovery well, which is 4½ miles northwest of nearest production in the Gulf-O'Brien field. Sid Richardson et al's M. J. Hill 1, SWc SE¼ Section 18, Block B-11, situated about two miles northeast of the Halley producer, was completed last February flowing 20 barrels of oil daily after plugging back from sulphur water at 3846 feet to 3155 feet.

Extension of the Halley area more than one mile to the northwest loomed the past week when Sun Oil Company's S. M. Halley 1, SEc N½ Section 24, Block B-12, P. S. L. Survey, encountered a spray of oil at 2694 feet while carrying an estimated flow of 30,000,000 feet of gas. Contractor on this semi-wildcat is using a heavy machine for drilling, and has progressed less than 100 feet within the past two months because of several fishing jobs and loss of a machine by fire. Sun Oil Company's test logged top of lime at 2485 feet, or 251 feet above sea level. It is about 30 feet lower on structure, based on this marker, than Skelly Oil Company's oil producer. Emperor Oil Company, Fort Worth, has moved in machine to drill S. M. Halley 1, SEc N½ SE¼ Section 12, Block B-12, P. S. L. Survey, situated about 1½ miles northwest of Sun Oil Company's test.

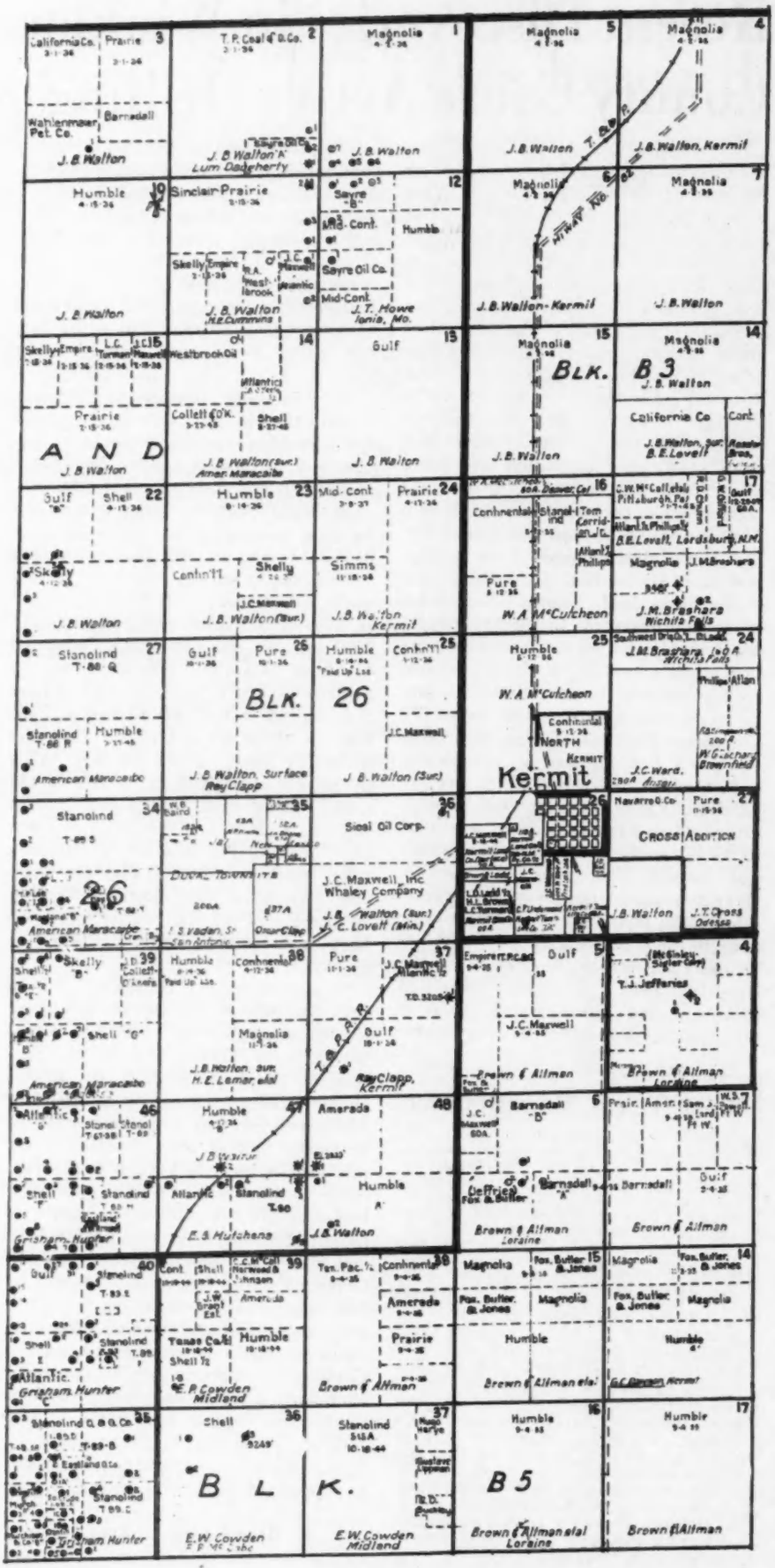
Brown-Altman Area

The Brown-Altman area, situated several miles south of Kermit and 1½

West Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ECTOR COUNTY (Judkins Field)—		
Sunray Oil Co.-Llano Oil Co., Jones 4	160	3660
HOWARD COUNTY—		
C. C. Henson & V. W. Fulglaar, W. T. Scott 1	25	1332
Internat'l Pet. Corp. (was S. B. Dorn), Kloh 1	320	2791
Herschback Pet. Corp., Davis 3-B	320	2792
Sinclair Prairie, L. C. Denman 1-B	390	2845
JONES COUNTY—		
Caltex Oil Co., H. N. Smith 1	*	2609
City of Abilene, fee 1	*	1515
UPTON COUNTY—		
TP Coal & Oil Co., J. F. Lane 4-C	320	2315
WARD COUNTY—		
Sid Richardson et al, L. Richter 2	715	2590
R. A. Westbrook, W. K. Cayton & H. Meredith, Bennett 6	1322	2559
WINKLER COUNTY (Sayre Field)—		
Sayre Oil Co., L. Daugherty 1	¶5	2737

*Failures; †Junked; ¶Million cu. ft. gas.



Map courtesy Zingery Oil Map Company, Fort Worth

miles due east of nearest production in the Hendrick field has two flowing oil wells and for operations listed. It is about midway between the Sayre and Halley pools, and has more than 100 feet of sandy-lime formation carrying oil production at intervals. The discovery well was drilled by J. O. Fox, W. E. Butler, Frank B. Jones and T. J. Jeffries in the NEc SW¼ Section 6, Block B-5, P. S. L. Survey, on the E. E. Brown & Altman tract for an initial flow of 130 barrels after shot, with a total depth of 3204 feet, or 363 feet sub sea. The original hole was lost while trying to complete at 3098 feet, and plugged back to 2715 feet to sidetrack. Top of oil pay in the re-drilled hole was logged at 3110 feet. These four partners have moved in materials to drill their second test 660 feet west of their producer, and a third location has been authorized. Barnsdall Oil Company's Eugena Brown 1-B, north offset to the discovery well was completed April 15 flowing 290 barrels daily through casing after shot of nitro in sandy-lime at 3103-3210 feet. It has a sub sea depth of 366 feet. Barnsdall Oil Company has started an east offset to the discovery well. Joe C. Maxwell, Fort Worth, and Atlantic Oil Producing Company have moved in machine to drill Brown-Altman 1, SEc of 60-acre lease situated in the northwest portion of section 6. Magnolia Pipe Line Company is serving the wells in this area, which yields 36 gravity oil, or about the same as that produced in the Sayre field.

Maxwell and Atlantic Oil Producing Company's Oscar Clapp 1, SEc NE¼ Section 37, Block B-26, P. S. L. Survey, situated about one mile northwest of the Brown-Altman pool, was recently completed as a failure after drilling into sulphur water at 3425-87 feet, or 641 feet sub sea. Undaunted by this failure the Siosi Oil Company is drilling J. C. Lovett 1, NEc Section 36, Block B-26, or about 1½ miles to the north, with 8,000,000 feet of dry gas showing from lime at 2588-91 feet.

Territory about five miles northeast of the Sayre field and equal distance southeast of the Scarborough-Llano field is holding the attention of operators as result of Sid Richardson et al's J. B. Walton-Pure 1, NW¼ Section 1, Block B-3, P. S. L. Survey, having logged top of brown lime at 2115 feet,

Winkler County is destined to again become one of the active drilling centers in West Texas through the development of the Sayre, Kermit and Halley pools from sandy-lime belt to the east and on a parallel trend with the famous Hendrick field. On the map to the left the Sayre pool is near the top, while the Kermit area is east of the old field.

or 832 feet above sea level. It occupies the highest structural position, based on this lime marker, than any previous test drilled in the county. Several dry gas producing horizons have been encountered in drilling to the 2800-foot level, or 147 feet above sea level. Richardson holds leases on about 5500 acres in the area, with Pure Oil Company retaining three eights interest in the Walton land contributed towards the drilling of the test.

Panhandle Oil Proration Inequalities Corrected

Pampa, Texas.—Proration regulations in the Texas Panhandle are to be revised by the Texas Railroad Commission so as to eliminate the practice of "freezing" high potential gauges recorded by new wells in the prolific areas, as result of wholesale complaints made by owners of wells lacking flush yield. The district has a top allowable of 58,800 barrels daily, exclusive of Moore County, and production is apportioned between wells on a potential basis. Heretofore no provisions have been made for cutting down the potential rating of a well after establishing its original rating. Numerous completions in western Wheeler County with a temporary high yield have commanded an unreasonable percentage of the district's allowable, according to complaints by operators in the settled areas.

Reductions varying from 10 to 50 percent in the potential rating of wells will be made at the end of 90 days after completion to eliminate the former practice of "freezing" potentials. Wells having a potential of 2500 barrels or more will be subjected to the 50 percent slash at the end of the first period, while those rated between 20 and 500 barrels will be given a 10 percent cut. Scale of reduction for wells falling within several other potential classes between the maximum and minimum will be applied. However, operators are to be given the privilege of taking new potential gauges if the automatic reduction is not acceptable, but most wells in the district will decline in potential to a greater degree than the new rules provide.

Temporary flush yield of wells from the 2500-foot granite wash formation in western Wheeler County frequently average from 2000 to 4100 barrels daily on the permitted five-day completion gauge, and individual wells have allowables ranging up to 291 barrels daily. These wells generally decline more rapidly than elsewhere in the district, and the original allowable has remained in force until the well could not produced its allocation.

Western Wheeler County contributed a number of large wells the past week. The Texas Company's P. M. Keller 9, SWc NE SW SW Section 48, Block 24, was the pace setter in flowing 2527 barrels oil and 8,200,000 feet of gas on the first day and 1844 barrels the next day from granite wash at 2420-2539 feet. Smith Brothers Refining Company and Hanlon-Buchanan Inc.'s R. L. Harlan 7, an inside location in NW Section 49, gauged 2087 barrels of oil and 6,000,000 feet of gas at 2463-2513 feet, and dropped to 1887 barrels on the third day. The well was agitated and finished the five-day official gauge with an average daily flow of 2031 barrels. The prolific area was widened to the south when Smith Brothers Refining Company and Hanlon-Buchanan Inc.'s G. W. Sitter 1, NEc W½ NE¼ Section 33, Block 24, made 50 barrels hourly at 2436-47 feet, with gas yield estimated at 22,000,000 feet daily. Top of granite wash section was logged at a sub-sea depth of 445 feet. Post Dated Oil Company's Sitter 1, a nearby gasser completed in the same section in 1928 by J. C. Neudigate et al, developed a flow of 250 barrels of oil and 8,000,000 feet of gas when deepened from 2140 to 2535 feet.

An aggregate of 8660 barrels of oil and 44,600,000 feet of gas production was added by the district the past week.

Texas Panhandle Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
J. R. McGill & Haze, E. Cooper 2	.630	3065
GRAY COUNTY—		
Kewanee O&G Co., R. Arnold-Morgan 3	305	3293
R. Arnold-Morgan 4	190	3254
HUTCHINSON COUNTY—		
Texas Plains Oil Co., E. E. Watkins 2	320	3006
S. & M. Oil Co., Moore-Landon (Conoco) 2	400	3120
MOORE COUNTY—		
Texoma Nat'l Gas Co., J. T. Sneed 4-P	¶30.6	2985
WHEELER COUNTY—		
Champlin Ref. Co., Thos. Edes 4	625	2553
Helena O&G Co., P. M. Keller 2	865	2544
Skelly, O. L. Derrick 14	665	2520
Smith Bros. Ref. Co. & Hanlon-Buchanan, Inc., Harlan 7	2135	2513
Texas, P. M. Keller 9	2525	2539

*Failures; †Junked; ¶Million cu. ft. gas.

Samfordyce Field Gets Short Extension

San Antonio, Texas.—Skelly Oil Company's Seabury 2-E extended the Samfordyce field, Hidalgo County, one location to the west and indicated that production will now cross the Starr County line. It is almost on the county line.

The well is flowing about four barrels of oil per hour through ⅛-inch choke, showing working pressure of 100 pounds on tubing and casing pressure of 310 pounds. It had gas sand at 2791-2801 feet, oil sand at 2801-2808 feet, bottomed in shale at 2808 feet.

This well brings the total number of producers in the field to 59. Five more wells are on the sand in process of completion at this time.

A recent gauge on Union Sulphur Company's American Rio Grande Land and Irrigation Company 3, several miles north of Mercedes, and in Hidalgo County, was 185 barrels in 24 hours through two ⅛-inch chokes on tubing, under a working pressure of 770 pounds and a closed in pressure of 850 pounds. The specific gravity of the crude is 57 degrees and it is being sold to a local refinery for $1.25 per barrel. Only 1400 barrels of storage has been erected on the lease, but more tanks are expected to be built shortly. No new locations have been announced for the district. The company, however, is dismantling the rig from the discovery well.

Carolina-Texas Field Deep Test Promising

San Antonio, Texas.—Carolina-Texas Oil & Gas Trust's Benavides 11, deep test in the Carolina-Texas field of Webb County, is in process of completion at 4993 feet. It is expected to establish a new deep producing horizon for the field, the deepest in the entire Mirando district. The well showed saturated sand in cores from 4974-93 feet. A test with an electric formation testing device indicated commercial production. The location is SW NE Section 683.

Clarkwood Field Hearing May 18

Austin, Texas.—A hearing on the Clarkwood field, Nueces County, has been scheduled by the Texas Railroad Commission for May 18 at Austin.

Rules for the spacing, drilling, completion and operation of wells in this field, which is a part of the Saxet gas field, will be considered at that time.

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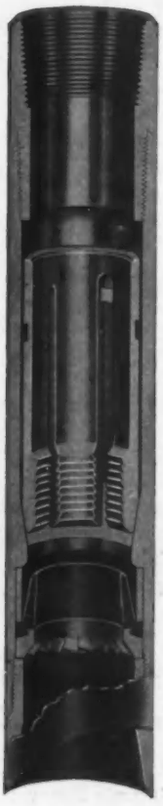

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Wildcat in Kerr County Running High

San Antonio, Texas.—The Hill Country again takes the spotlight of South Texas with a key wildcat running high on the Big lime. This district, although without a single commercial field, is considered one of the most important undeveloped reserves in the general area.

Jeff Love & Eastland Oil Company's Jeff Love 5-E, Kerr County, topped the big lime at 5385 feet, or 115 feet higher than Jeff Love 2, which showed considerable oil and some water in the Ellenberger member of the Ordovician several years ago. The well is in Section 1594, and is about 45 miles southwest of Kerrville.

San Antonio.—Big Lake offices of the Plymouth Oil Company have been merged with the South Texas division of the same concern and the entire 20th floor of the Milam Building in San Antonio has been leased for the offices.

South Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BEE COUNTY—		
Mills Bennett & W. F. Morgan, Bassinger 1, nw ne nw sec 7, Uranga gr (Dirks)	250	3853
Ed Falvey, Grissom 1, P. B. Mill-Early sur (Caeser)	*	3050
Heyser, Heard & Walton, P. Perez 2, blk 16, se½ sec 8, Uranga gr (W. Tuleta)	*	4060
Inter-Allied Pet. Co., L. L. Nix 1, sec 20 (W. Tuleta), perf csg 3985-87	35	4001
El Toro Oil Co., E. Gardner 2, F. Lewis sur (Caeser)	840	3030
Tother Oil Co., J. T. Hudman 1, C. Baker sur (Caeser)	*	3117
Worth Oil Co., Rutledge 1-A, 1100 ft nl, 250 ft el 200-ac tr, A. Hadley sur, opens new field	150	3394
BEXAR COUNTY—		
George O'Neill, Holly Crouch 1, 580 ft nl, 1800 ft el 150-ac tr, M. Gotari sur No. 5	*	1447
CALDWELL COUNTY—		
H. H. Coffield. C. C. Franks 1, 870 ft sl, 150 ft el 131-ac tr, E. Brown sur	*	3070
Fomax Oil Co., B. G. Tiller 1, G. Hinds sur (Salt Flats)	*	lcn.
DUVAL COUNTY—		
Armoil Prod. Co., Heller 3, ne sw se sec 44 (Gov't Wells)	50	2335
Mills Bennett, Duval County Ranch 1-A, 330 ft sl & el blk 17, sur 100	*	1790
Magnolia, C. W. Hahl 7-C, ne se sec 61 (Gov't Wells)	25	2350
J. O. Wilson 14, nw sec 134 (Gov't Wells)	†	2365
Sun Oil Co., L. Weiderkehr 74, sec 359 (Gov't Wells)	250	2290
Texas Co., M. Vela 6, SE sec 42 (Loma Novio)	840	2705
GUADALUPE COUNTY—		
Grayburg Oil Co., McKean 14, Cottle sur (Luling)	1	1854
HIDALGO COUNTY—		
Edwards & Alford, E. Flores 2, sh 267, por 38, (Samfordyce)	*	lcn.
Earl S. Hankamer et al, Frank Rabb 1, 330 ft el, 490 ft sl of 511-ac tr, Leguna Seca League	*	5379
Mortex Oil Co., F. B. Guerra 1, sh 254, por 40 (Samfordyce)	30	2778
Shafer & Mundy, Tobasco Con. Ind. School Dist. 1, sh 260, por 38 (Samfordyce)	100	2771
Skelly Oil Co., Seabury et al 1-E, sh 256, por 38 (Samfordyce)	250	2808
Union Sulphur Co., American Rio Grande Land & Irrigation Co. 3, 600 ft sl, 485 ft el of lot 2082, blk 86, N. Capisallo Dist., Llano Grande gr (opens new field)	250	7493
JACKSON COUNTY—		
A. M. Harris, Whittley 1, Francis Keller sur	*	lcn.
KARNES COUNTY—		
Harvey & Henderson, Paul Jauer 1, 330 ft nl and wl of tr, A. Borscheimer sur	*	3205
LIVE OAK COUNTY—		
Lion Oil Ref. Co., P. E. McNeill Est. 1, Jane Curry sur (McNeill) owdd, old td 4376	432	4388
McMULLEN COUNTY—		
Loma Oil Co., L. Jacob Corp. 36-A, W. H. Jacob sur No. 8 (Jacobs)	45	978
NUECES COUNTY—		
J. J. Culton et al, J. Sagarin 3, Shepard Farm Lots No. 5, CEPI& M sur (Saxet)	200	4882
Texon O&R Co., Kocurek 1, 600 ft wl, 700 ft nl of J. Ward sur, s of Saxet field	275	4882
REFUGIO COUNTY—		
United Prod. Co., M. F. Lambert 17, blk 8, Carr & Connell sur (Greta)	300	4385
SAN PATRICIO COUNTY—		
Humble O&R Co., Welder 1, 2400 ft nel, 500 ft nwl lot 4, A&O sub, Villareal gr	*	5547
Plymouth Oil Co., Welder 3-A, 600 ft e, 2150 ft s No. 1-A, J. M. Portillo sur (Sinton)	250	5437
STARR COUNTY—		
R. G. Hall, Doyno & Chatfield 1, blk 13 C, tr 21, por 80 (Rio Grande City)	*	1395
VICTORIA COUNTY—		
C. M. C. Oil Co., Anton Prybil 3, R. Manchola gr (Coleto Creek)	*	3056
Shell Pet. Corp., A. M. McFaddin 1, J. Varin sur (McFaddin)	¶50	3512
K. B. Yost, Robt. Kanster 1, R. Manchola gr (Coleto Creek)	*	lcn.
WEBB COUNTY—		
Cole Pet. Co., A. M. Bruni 1, sec 6, Arispe gr (Bruni Townsite, Cole), perf 2240-53	¶20	3398
Gates Ranch Oil Co., Gates 5, 990 ft nl and el sec 62	*	3001
Highland Oil Co., A. M. Bruni 7, sur 7, Arispe gr (Bruni townsite, Cole)	400	3403
O. W. Killam, A. M. Bruni 32, blk 28, sur 8, Arispe gr (Bruni townsite, Cole)	*	3446
A. M. Bruni 33, blk 28, sur 8, Arispe gr (Bruni townsite, Cole)	*	lcn.
A. M. Bruni 35, sur 6, Arispe gr (Bruni townsite, Cole)	550	3407
Sun Oil Co., A. M. Bruni 4, sub 5, Arispe gr (Bruni townsite, Cole)	*	lcn.
WILLIAMSON COUNTY—		
H. F. Goff et al, Timmerman 1, 963 ft n of creek, 1700 ft el 545-ac tr, H. Cartwright sur (near Byersville)	*	2353
G. L. Rowsey, Tr., Zieschang 1-B, H. White sur (Byersville)	5	920
WILSON COUNTY—		
Universal Oil Co., O. F. Burney 1, 330 ft sel and nel 53-ac tr Arocha sur	†	640
ZAPATA COUNTY—		
Kleiner & Hill, Gutierrez 1, sh 4, Comitas gr (Escobas)	12	1248

*Failures; †Junked; ¶Million cu. ft. gas.

Bee County "Hot Spot" Area Receives Another New Strike

San Antonio, Texas. — Worth Oil Company's Rutledge 1-A, Bee County wildcat, late in the week was flowing an estimated 25,000,000 cubic feet of gas along with 150 barrels of oil per day through ½-inch choke, opening another pool for that county. This well is producing from the Pettus sand at 3386-94 feet, elevation 390 feet, derrick floor.

The location is 1100 feet from the north line and 250 feet from the east line of a 200-acre tract in the A. Hadley Survey, about two miles northeast of the Grayburg field, in which nearly a dozen tests have netted only one small oil producer. It is just southeast of the Caesar field and between that production and the Pettus field.

The well was drilled on a small block, consisting of only 250 acres. Considerable close in acreage is held by Sun Oil Company, Stanolind Oil & Gas Company, Humble Oil & Refining Company, Magnolia Petroleum Company, L. W. Stieren, Ed Falvey and others. A fair drilling campaign is to be expected. The original drilling block is split up to a point where there are a number of small tracts ranging from 2.5 acres up to 10 acres held by other operators than the owners of the well.

The well is the second to be drilled on the tract by the company, the first encountering the sand and blowing out when drill stem test was attempted. The hole could not be saved and the second test was drilled only a few feet to the south. Another test, drilled by Stieren et al, ¼-mile to the north, showed dry gas in the Pettus sand, but made salt water when carried to the Yegua sand.

The oil is 30.3 gravity, corrected, and the temperature is 70 degrees. Pressures are reported at 1140 pounds working on the tubing and 1250 pounds closed in on the casing.

About 2000 feet southwest of the above well, Falvey et al's S. D. Copeland 1, 1650 feet from the north line and 330 feet east line of the Copeland tract, B. Q. Hadley Survey, has been spudded.

Caesar Field

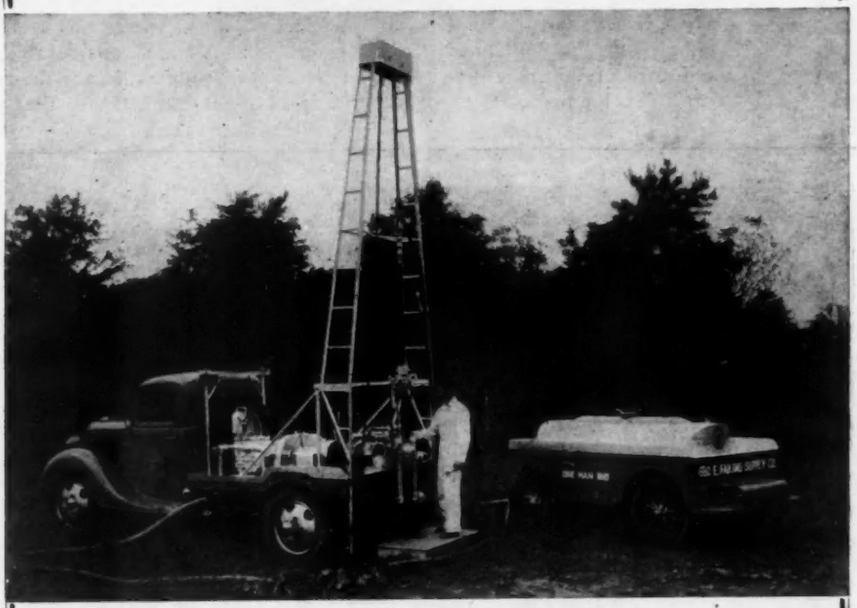
The Caesar field was defined in several directions during the week. Ed Falvey's Grissom 1, P. B. McEarly Survey, about 3000 feet from the west and near the north line of the survey, tested salt water at 3044-50 feet, elevation 380 feet, derrick floor. It is just east of several large producers and on the south flank of the field.

Tother Oil Company's J. T. Hudman 1, C. Baker Survey, most southwesterly well, has been abandoned at 3117 feet. It is just below the known water line.

Several producers are in the making in the field, however. Caesar Oil Company's R. E. Miller 5, Lewis Survey, is blowing some oil along with lots of gas under a tubing and casing pressure of 1000 pounds. The test is completing through ½-inch choke. The well is bottomed at 3035 feet. A weephole job was attempted, the perforations being between 3027-35 feet. When attempting to bring in, the well showed only a small pressure. It then was gun perforated between 3000 feet and the total depth, allowing the volume of gas to come in. The well likely will make a good producer after a fluid column is built up.

Puterbaugh et al's W. J. Vaughan 1, F. Lewis Survey, elevation 404 feet,

One Man Rig



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derrick floor, has sand at 3036-42 feet, with casing set. It looks like a big producer.

West Tuleta Field

Two short extensions were provided to the West Tuleta field, one on the northeast side and the other on the south side. Inter-Allied Petroleum Corporation's L. L. Nix 1, Section 20, south of the mid-section of the field, is spraying about 35 barrels of oil per day. The production is through a low pressure separator, but the volume of fluid is expected to be materially increased when a high pressure separator is installed. The depth is 4001 feet with casing perforated at 3985-87 feet.

Edwin M. Jones' J. M. Rapp 3-A, Section 5, most northerly well in the field, tested 275 feet of oil five feet of salt water and 265 pounds pressure from the sand at 3917-33 feet. It has drilled plugs and is in process of completion.

Dirks field, northwest of the West Tuleta production, is coming in for a nice play with several wells started. The wells have not reached an interesting depth, but their outcome will have bearing on the future of this new district, just starting development.

New Port Lavaca Field Extended Mile Southwest

San Antonio, Texas.—A probable one mile southwest extension and the staking of a location which may lead to a townsite drilling campaign featured activity in the Port Lavaca area, Calhoun County, during the week.

The Texas Company's W. H. Wehmeyer 1, M. Sanches Survey, one mile southwest of the discovery oil well, was preparing to run casing on saturated sand. The hole is bottomed at 6238 feet, considerably above the water line. No details were available, although the test is expected to make a producer.

Tulane Gordon staked location for No. 1 Shofner on an eight-acre tract just north of the Port Lavaca town proper in a suburban subdivision. The geophysical information indicates that this well will make a producer, which would likely lead to more wells on small lots in the town itself.

The Texas Company has three more wells nearing the level where one well is producing oil. All are considerable distance from the producer, hence their outcome is of great importance. Blardone 1, S. Shupe Survey, south of Port Lavaca, is down 5350 feet, while R. Duelburg 1, 4500 feet west of production, is coring at 6190 feet. Martin 1, 5 miles southwest of Port Lavaca and most distant from production, is drilling at 4720 feet.

Halliburton Oil Producing Company's D. Burton 1, offset to the discovery, is drilling at 4630 feet.

Test Produces Half Mile South of Saxet

San Antonio, Texas.—Texon Oil & Royalty Company's Kocurek 1, about one half mile south of Saxet field, Nueces County, is flowing 11 barrels of 25.5 gravity oil per hour through ¼-inch choke from 4876-82 feet. It is showing a tubing pressure of 150 pounds and casing pressure of 450 pounds. Elevation is 59 feet, derrick floor.

The well is in the northwest corner of J. Ward Survey, and just east of the town of Clarkwood. It is called a new pool by some, although the strike undoubtedly proves up another producing portion of the 4800-foot sand lens.

In the central portion of the field, J. K. Culton et al's J. Sagarin 3 is flowing 70 barrels per day through 1/16-inch choke from sand at 4870-82 feet. It has an elevation of 66 feet, derrick floor.

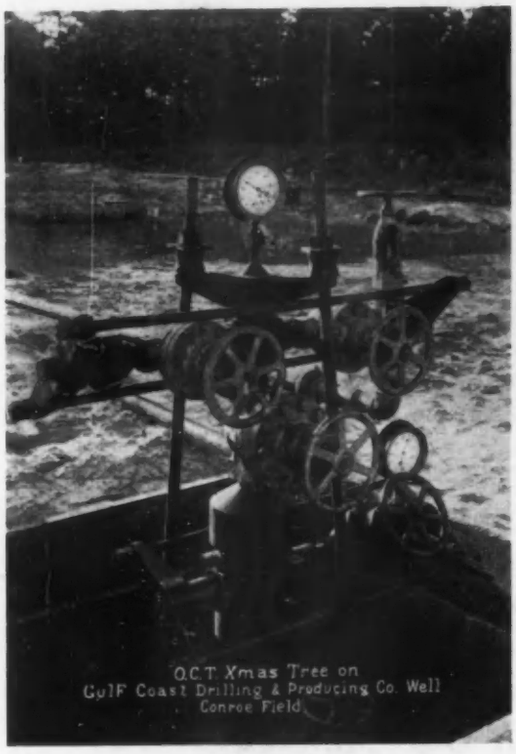
Extend Loma Novio 1½ Miles to South

San Antonio, Texas.—An extension of 1½ miles south to the Loma Novio field, Duval County, seems probable with Tex-La Oil Corporation's Hubbard 1, taking a saturated core at 2795-99 feet and preparing a drill stem test. The well is in SW¼ Section 84. It has an elevation of 685 feet, derrick floor.

Buchanan and Blanco Oil Company's G. Ruiz Estate 2, Section 73, in the new North Loma Novio field, is the second producer for the field. Although not fully completed, it looks like at least several hundred barrels per day from sand at 2693-99 feet. Ruiz 3 is coring for the sand. Humble Oil & Refining Company is drilling a direct east offset on the Welder land.

Pearsall Area

San Antonio, Texas.—Amerada Petroleum Company now has two active operations in its large Pearsall block in Frio County. The newest test is Halff & Oppenheimer 4, location 3200 feet from the northwest line and 990 feet from the northeast line of Section 15, A. H. Gibson Survey, about 1000 feet northeast of same fee 3, a producer. It has derrick up. W. H. Smith 1, J. B. Mason Survey, about 4½ miles southwest of production, is rigging up.



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Hastings Discovery Well Again Recompleted

Houston. — Stanolind Oil & Gas Company's J. W. Surface 1, discovery well for the Hastings field, Brazoria County, was recompleted at the close of the week for 312 barrels per day from 6118 feet. The flow was through a three-sixteenths-inch choke with a tubing pressure of 810 pounds and the casing pressure was 580 pounds. The oil showed seven percent drilling mud and wash water. The gas oil ratio was 280 to 1. The cement plug was drilled from 6116 to 6118 feet. This well has been completed a number of times due to salt water encroachment the operators recompleted the well.

The furtherest northern producer Wooster 1, is now producing its daily allowable. The well found Discorbis from 5250 to 5254 feet, Heterostegina from 5609 to 5635 feet and the Marginulina from 5725 to 5755 feet. The same operators Paul 1, which is a good producer topped the Discorbis at 5061 feet and missed the Heterostegina and got the Marginulina formation at 5235 feet.

The remaining five wells drilling in the field were at unimportant depths at the end of the week. The Hastings field is one mile long in the north and south direction and approximately half mile wide in the east and west direction.

Waller County

Houston. — Buck Oil Company's Vaughn 1, 600 feet due west of Seaport Oil Company's Vaughn 1, which discovered the San Felipe field, J. McFarland Survey, Waller County, was shut down waiting on orders at 3233 feet at the close of the week. The test from 2969 to 2973 feet showed oil and from 2973 to 2977 feet in shale with streaks of sand and from 2977 to 2981 feet showing oil.

A drill stem test was made from 2755 to 2968 feet and the well showed 20 thribbles of fresh water through a quarter-inch choke on top and a three-eighths-inch choke on bottom.

Sabine County Well To Test Wilcox Showing

Marshall, Texas.—Preparations were being made last week to run formation tester in a wildcat test in Sabine County, east Texas, after a reported oil show in ten feet of sand identified as Wilcox logged from 858 to 868 feet in Smithsonian Petroleum Company's (Ed C. Smith) Hamilton 1, John Haley Survey, near Hemphill. The test is on a 7000-acre block.

In Panola County, G. F. Hudson was preparing to set four and one half-inch casing to test a reported oil show in Blossom (Ozan) sand at 2337 feet; elevation is 283 feet.

In Harrison County, Socagee Oil Corporation, after abandoning Mrs. Z. Abney 1, J. Lipscomb Survey, as a salt water hole at 984 feet in Nacatosh, have started to rig up for another test in the same county, Vaughn 5, W. R. Anderson Survey, located 650 feet west of Vaughn 4, the last of four tests drilled on this lease by Eureka Gas Company.

Gasoline Plant May Be Built at Eureka

Houston.—It is reported that C. B. Bunte is contemplating construction of a gasoline extraction plant at his well in the Eureka area of Harris County, to treat wet gas from the well. A pipe line is to be laid from the well along the Houston Ship Channel to serve the concerns along that area. It is reported but not confirmed that he has contracted for 5,000,000 cubic feet of gas daily.

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Good Louise Field Well Is Completed

Houston.—Pure Oil Company's C. F. Wharton Estate 1, 2800 feet northwest of the discovery well and 1700 feet west of Adams 1, F. Walnut Survey, Louise field, Wharton County, was completed for 15 barrels per hour from 5169 feet. The flow was through a quarter-inch choke with a tubing pressure of 1071 and casing 987 pounds. The well has been pinched back through a fourteen sixty-fourth-inch choke and is making 255 barrels per day. This well is the best well to be completed in the field and is rounding out the field in that direction.

New Deep Sand Is Showing Gas at Batson

Houston.—In the Batson field of Hardin County, John Deering's Bullock 1, W. Donoho Survey, was drilling below 5718 feet at the end of the week after having several showings of gas in a new deep sand for the field.

From 5680 to 5697 feet the well showed gas. From 5697 to 5700 feet another showing of gas was encountered. At 5710 feet the well was still in the gas sand. This well topped the Discorbis at 3355 feet, Heterostegina 3490 feet, Frio 3698, Warreni 4657 and the Discorbis Yegua at 5472 feet.

The same operator's Hooks 3, was down to 5643 feet waiting on cement to set after topping a sand showing gas and oil at 5576 feet. Seven-inch casing was set on top of the sand.

Sterling Oil & Refining Company's L. Cruse 1, Donoho and Green Surveys, was waiting on cement to set at 5687 feet after setting seven-inch casing at that depth. The sand was topped at 5684 feet with the bottom of the hole at 5696 feet. It drilled a sand from 5684 to 5696 feet with no showing and a salty taste. A nine-inch hole was reamed to 5678 feet and seven-inch casing was run to perforate.

Jasper County

Houston—Republic Production Company's Sabine Tram Company 1, northeast of Buna, H. & T. C. Survey, Section 71, Jasper County, was drilling in grey sand at the close of the week at 7440 feet after coring a sand with a showing of gas from 7422 to 7433 feet. Another core from 7433 to 7434 feet the operators were in grey sand with no showings. The operators will core on down and then run an electrical logging device.

Second Anahuac Well Flows 28 Barrels Hour

Houston.—The second producer was added to the new Anahuac field of Chambers County at the close of the week when Humble Oil & Refining Company completed its Clark 1, for 28 barrels of 35 gravity oil per hour from 7117 feet. The flow was through a quarter-inch choke with 1000 pounds on the tubing and 1200 pounds on the casing.

The well came in at the rate of 31.2 barrels per hour through a quarter-inch choke at 2 a. m. May 3, 1935, with a tubing pressure of 1060 pounds and casing pressure of 1200 pounds. The gravity was 35 degrees at 70°F. The oil showed seven-tenths of one percent wash water. At 6 a. m. the well was making 28.6 barrels per hour pipe line oil.

The producing Frio sand was topped at 7034 feet and the operators had showings of oil down to 7117 feet. This second producer topped the Discorbis at 5963 feet, Heterostegina 6324, Marginulina 6600 and the Frio at 7034 feet.

It is located 466 feet each way out of the southeast corner of H. & T. C. Survey, Section 57, being a west offset to the discovery well.

The same operator's Broussard 1, 466

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feet out of the northwest corner of H. & T. C. Survey, Section 63, being south offset to the discovery well, ran an electrical logging device to 7099 feet after having its first showing of oil from 7018 to 7099 feet, and set casing at close of week. This test topped Discorbis at 5960 feet, Heterostegina 6320 feet, Marginulina 6650 feet and Frio at 7018 feet. Elevation is 28 feet. The latter well is running about 16 feet lower than the second producer.

Humble Oil & Refining Company has made location for A. Middleton 3, H. & T. C. Survey, Section 58 and 2332 feet north of the south line and 2332 feet east of the west line of survey. Being approximately 2500 feet northeast of the discovery well.

It is reported that Humble Oil & Refining Company is contemplating building an eight-inch line from the field to its Baytown refinery.

South Houston Test at 4967 Feet

Houston.—Johnson & Johnson and Stanolind Oil & Gas Company's Fee Land 1, South Houston, Harris County, was drilling in green sticky shale below 4967 feet at the end of the week.

Cores taken from 3820 to 3835 feet and from 4110 to 4115 feet contained odors of oil. From 4265 to 4430 feet and from 4410 to 4440 feet the first core showed an odor of oil with the last core containing no shows, from 4836 to 4895 feet a sand was cored which had a salty taste and from 4953 to 4967 feet a gas sand was cored.

The well created an extensive leasing campaign in the city limits of South Houston with several tracts selling at $700 cash and $700 out of oil before the well has even made a test. It is the concensus of opinion that this well will make a producer and if not a gas well producing distillate. If the well proves as a producer it will open a new field for Harris County and will also be the third strike for Stanolind Oil & Gas Company on the Texas Gulf Coast out of the three wildcats drilled.

Esperson Field

Houston.—General Crude Oil Company's 10, D. Kokernot Survey, Esperson field, Liberty County, was completed during the past week for 430 barrels of pipe line oil from 5822 feet. The well had previously showed about 50 percent salt water and the device that was used in the Conroe field on Sun Oil Company's Jones 1, which proved successful on that well proved successful on this well. The well is now making pipe line oil with no salt water.

New Dickinson Well Flows 31 Barrels Hourly

Houston. — Another producer was added to the Dickinson field of Galveston County when Humble Oil & Refining Company's Maco Stewart A-3, was completed for 31.8 barrels per hour of 34.8 corrected gravity oil from a plugged back depth of 8060 feet. The oil showed six-tenths of one percent basic sediment and water.

The flow was through a quarter-inch choke with 1700 pounds on the tubing and 2500 pounds on the casing. The hole was drilled to 8146 feet in sand showing oil and was then plugged back to 8060 feet where the well was completed.

Maco Stewart A-3 is located approximately midway between the discovery well and Jones 1. It is 338 feet from the most easterly northeast corner and 2016 feet from the east line of 119-acre tract in J. Sellers Survey.

Turnbull & Irwin's Piazza 1, 250 feet south and 460 feet west of Humble Oil & Refining Company's Jones 1, J. S. Sherman Survey, was drilling ahead below 6408 feet at the close of the week. This well was farmed out to Turnbull & Irwin by Gulf Production Company who retained one thirty-second override in royalty and receives one half of the net profits after the well has paid for itself. Turnbull & Irwin turned half of its half interest in the well to Durman Oil Company of Tulsa, Oklahoma. The consideration was not reported.

The Dickinson field now covers roughly 640 acres.

Polk County

Houston. — Gulf Production Company abandoned its location in Polk County for Trinity Lumber Company 5, 600 feet north of the west line of survey and thence at right angles of the southwest corner of Oliver Peterson A-745 Survey. The operators made location for Trinity Lumber Company 1, 4500 feet west of the east line and 1200 feet north of the south line of 1549 acre tract in the J. M. Gomez Survey. The well is located in Trinity County.

In San Jacinto County, Turnbull & Irwin's Moore 1, 1250 feet north and 5400 feet east of the southwest corner of J. D. Martinez No. 3 Survey, was building roadway. This well was formerly Shell Petroleum Corporation but was farmed out to Turnbull & Irwin who received 40 acres and $12,000 in cash to drill a well to the Cockfield formation with Shell Petroleum Corporation retaining an option to purchase back the well.

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Second Pierce Junction Vicksburg Well Completed

Houston.—Hamil & Smith's Howe 1, on the southwest side of the Pierce Junction field, Harris County, blew in the first part of last week and is now flowing 490 barrels of pipe line oil through the drill stem. The drill stem has connected two ⅛-inch chokes. The pressure is 1710 pounds. Bottom of the hole is 6501 feet.

This is the second well on this side of the field to be completed through the drill stem. Navarro Oil Company's Cain 2-A, was the first well to blow in and flow through the drill pipe. The well also discovered the new producing sand for the field and Hamil & Smith's Howe 1, is the second well to produce from this formation on this side of the field.

Revive Drilling

One of the most closely watched wells in the Gulf Coast is Gulf Production Company's Taylor 39, 1729 feet north and 75 feet from the east line of J. Hamilton Survey, being on a 560-acre tract. This well is now drilling at 5850 feet and is an offset to Navarro Oil Company's Cain A-2, which discovered the Vicksburg producing formation for this field. Should this well prove as a producer it will revive drilling in the Pierce Junction field and will force a lot of offset drilling and in turn will add new life to the field. Gulf Production Company set 5770 feet of 9⅝-inch casing as protection for the heavy gas sand which has caused all the wells to blow out. Not only is this well being watched with increasing depth but is being visited daily to see the new equipment that has been installed on this rig which makes it one of the most modern and up to date rigs in the Gulf Coast.

Gulf Production Company's Taylor 39, is running considerably higher than Hamil & Smith's Howe 1, upon comparison of the two wells on the geophysical markers. Howe 1, topped the first discorbis from 4255 to 4258 feet, first Heterostegina from 4531 to 4533 feet and the first Marginulina from 4606 to 4610 feet. Taylor 39 encountered the first Discorbis from 3974 to 3977 feet and the first Marginulina from 4186 to 4191 feet being some 500 feet higher than Howe 1.

Houston, Texas.—The Houston Geological Society held a dance at the Beachmont Club May 4.

Texas Gulf Coast

Company, Well and Location	Init. Prod. Bbls.	Depth
ANHUAC—		
Humble, Clark 1	672	7117
BARBERS HILL—		
Yount-Lee-Phillips 7 (wo)	290	5590
CONROE—		
Strake Pet. Co., Hammond 5	*	5156
Krohn 10	350	5062
DAMON MOUND—		
Cummings, Mulachuy 1	*	557
DICKINSON—		
Humble, Maco Stewart A-3	816	8060
ESPERSON—		
General Crude, Davis 10	430	5822
FANNETT—		
Gulf, C. W. Burrell 8	435	4301
HIGH ISLAND—		
Yount-Lee, Gordon-Viterbo A-1	500	4402
HULL—		
Republic Prod Co., Dolbear 47 (wo)	180	2753
Dolbear 156	305	2425
Texas Co., Barrow Fee 6 (wo)	148	4883
LOUISE—		
Pure, Wharton 1	360	5169
MANVEL—		
Texas Co., F. Lieder 3	200	4005
PIERCE JUNCTION—		
Gulf, Taylor 21 (wo)	8	3895
Hamil & Smith, Howe 1	490	6501
Rio Bravo Oil Co., Settagast B-13	210	3849
RACCOON BEND—		
Humble, Woodley 14 (wo)	25	4152
SOUTH LIBERTY—		
Sun, Mitchell 35 (wo)	20	1292
THOMPSON—		
Gulf, T. R. Booth 12	*	5417
A. Hamerstrom 8	1440	5381
TOMBALL—		
Continental Oil Co., Petrich 3	570	5574
Humble, C. F. Hoffman 2	400	5550
R. Michel 1	515	5579
E. Schultz C-1	540	5570
GRIMES COUNTY—		
Anderson & Kerr, A. Lueder 1, sw of Plantersville, B. Brantley sur	*	4242
POLK COUNTY—		
Gulf, Trinity Lbr. Co. 1, Oliver Peterson A-745 sur	*	lcn.

*Failures; †Junked; ¶Million cu. ft. gas.

Three Wells Finished In New Gillis Field

Lake Charles, La.—The Gillis field of Calcasieu Parish added three new producers during the past week when Union Sulphur Company completed Barbe 3, Mayo Reeves 1 and 2 for nice oil wells.

Barbe 3, Section 11-9s-8w, 500 feet north of the discovery well, was completed for 610 barrels daily through a quarter-inch choke with a tubing pressure of 1100 pounds. The oil was 33.4 gravity. The bottom of the hole is 6756 feet and the sand was topped at 6750 feet and six and five-eighths-inch casing was set at 6748 feet.

Mayo Reeves 1, Section 12-9s-8w, was completed at 6751 feet and was making 200 barrels of fluid showing three percent basic sediment and water through a one-eighth-inch choke with a tubing pressure of 2200 pounds. The oil was 37.4 gravity. The oil sand was topped at 6741 feet and six and five-eighths-inch casing was set at that depth.

Mayo Reeves 2, 600 feet north of Union Sulphur Company's State 2, Section 19-9s-8w, was finaled at 6727 feet for 15 barrels per hour through a quarter-inch choke with a tubing pressure of 1100 pounds.

Fohs Oil Company's Castle 2, has been plugged back to 6448 feet and the operators are drilling in a new hole down to the producing sand.

Roanoke Field

Lake Charles, La.—Glassel et al have made location for Louisiana Irrigation Mill Company 1, in the canal in the Roanoke field of Jefferson Davis Parish. The well is located 695 feet east and 47 feet north of the southwest corner of section 1-9s-4w.

Shell Petroleum Corporation's J. Kratzer 3, 1500 feet south of the discovery well, Section 12-9s-4w, was flowing washwater and a small amount of oil at the close of the week from 7597 feet. The operators have made location for Kratzer 4, 1332 feet south and 440 feet east of the northeast corner of Section 12-9s-8w.

South Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CAMERON MEADOWS—		
Magnolia, Cameron Meadows 11	364	3362
GILLIS—		
Union Sulphur, Barbee 3	610	6756
Mayo Reeves 1	200	6751
Mayo Reeves 2	364	6727
IOWA—		
Shell, Heyd 15	1153	4457

*Failures; †Junked; ¶Million cu. ft. gas.

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Gulf Coast's Deepest Oil Producing Field Is Opened

Lake Charles, La.—The Texas Company's Bayou St. Denis 1 gave indications last week of discovering the deepest oil field in the coastal region when it showed 2500 feet of oil on a 15-minute drill stem test made through three quarters-inch chokes. From this information it was estimated that the well would make 140 barrels of pipe line oil per hour. The well, in addition to being the deepest production found in the Gulf Coast, if successfully completed will be the first commercial oil production in Jefferson Parish, Louisiana. At the end of the week the derrick had been braced preparatory to landing a long string of casing. A string of 1166 feet of 10¾-inch casing previously was set.

The bottom of the hole is 9572 feet and the drill stem test was made from sands believed to be either in the Marginulina formation or the Heterostegina from 9558 to 9572 feet. The drill stem test showed good gas pressure and no water. At the close of the week casing was being run to the bottom to make a production test.

The test was spudded January 26, 1935, and at 1510 feet had a showing of gas. The hole was carried to 5137 feet in sand showing oil. On cores from 5094 to 5107 feet, 5107 to 5114 feet, 5114 to 5127 feet and from 5127 to 5137 feet, it showed oil in sands with streaks of shale. From 5114 to 5127 feet 10 feet of saturated oil sand was found that probably would have made a nice producer in this Miocene formation, but it was decided to deepen to the Oligocene zone. Another good showing of oil was encountered from 5647 to 5651 feet and at 5788 feet, with the top of the sand found at 5783 feet. On cores from 6846 to 6865 feet and 6876 to 6881 feet a good showing of oil was obtained.

A drill stem test from 8070 to 8090 feet yielded 20 thribles of oil and 24 thribles of salt water with a 25 pound pressure through a quarter-inch choke on bottom and a three eighths-inch choke on top. The test was made in 20 minutes. An electrical logging device showed three feet of sand containing salt water and the upper sand showing seven ohms.

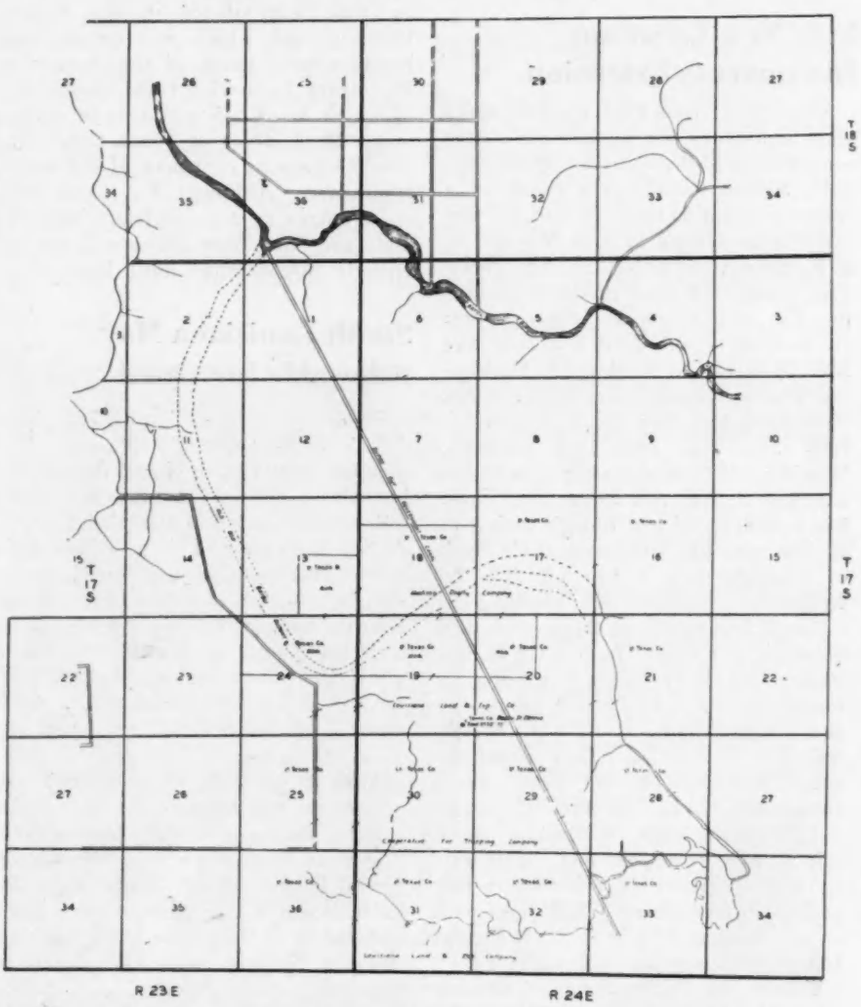
The hole was carried on down to 9541 feet and on a core from 9530 to 9533 feet a good showing of oil was received and the operators tried to receive two other cores below 9533 feet but they were lost and a core was taken from 9536 to 9542 feet, where the formation was sand showing oil free from salt water. From the last mentioned depth cores were taken on down to the total depth.

This possible discovery well is situated on a structure that is regarded as a deep seated salt dome and was discovered by The Texas Company in 1933 with reflection seismograph instruments. The area has been worked with geophysical instruments by several major oil companies from time to time. Gaither Jones, Houston independent oil operator, took 16,000 acres in this area and consummated a deal with The Texas Company to do geophysical work. After the work was done a selection price was paid on 5000 or 6000 acres, Gaither Jones retaining a one forty eighth override in royalty.

The other lease holders or royalty holders in the area are Cooperative Fur Trapping Company, which holds an interest in Sections 28, 29, and 30, township 17 south, 24 east, also Section 25-17s-23e. Madison Realty Company has an interest in Sections 17 and 18 and the N½ of Section 19 and the NW¼ of Section 20, all in 17 south and 24 east. The SE¼ of Section 13 and the N½ of Section 24-17s-23e. The Louisiana Land & Exploration Company has interest in the S½ of Section 19, S½ of NE¼ of Section 20 and 21-17s-24e. Also the S½ of Section 24-17s-23e.

The well is located 200 feet from the south line of Section 19-17s-24e and 2100 feet west of Government Canal, which runs from Barataria Bay to Lafitte through Harvey's Canal to the Mississippi River.

Should the well prove as a producer the oil will be carried out by barges from the location. The operators dredged to the location from the Government Canal. It will be carried through the above mentioned bays and canals to the Mississippi River and down to The Texas Company's refinery above New Orleans.



The Bayou St. Dennis area showing The Texas Company's Bayou St. Dennis 1, wildcat which looms as the discovery well for the new field. (Map courtesy Gulf Coast Engineering Company)

DeSoto Parish Wildcat Has Good Oil Showing

Shreveport, La.—E. B. Bird and associates of Beverly Hills, California, reported last week that six joints of oil appeared in thirty seconds in their A. D. Johns, Jr., 1, SE NW 20-14n-16w, a wildcat in DeSoto Parish, when formation tester was run. When the tester had been open only this brief period the seat collapsed. Total depth is 2638 feet, with eight feet of sand logged from 2630-38 feet, identified as Tokio; elevation is 290 feet. Nacatosh was logged at 1229 feet and Blossom (Ozan) at 2105 feet.

Operators announced that six-inch casing would be set immediately without another formation tester being run. The casing probably will be set about 2620 feet where sand was first encountered, eight feet of the upper sand being separated from the lower sand by two feet of hard formation.

This group has 4700 acres in leases acquired from A. D. Lynch of Little Rock, Arkansas.

Five New Locations In Converse Extension

Shreveport, La.—Five new locations were announced last week in the southern offshoot of the Converse chalk rock field, Sabine Parish, as a result of a recent completion there, four of the new tests being offsets to Hill Meyers' F. & P. Henderson 1, NE SE NE 29-9n-13w, completed as a producer recently. The new Converse locations are: G. M. Collins' Cranford C-1, NW SW NW 28-9n-13w, a derrick; H. H. Morris, Trustee's A. Henderson 1, NE NE 29-9n-13w, location; A. Henderson 2, NW SW NE 29-9n-13w, location; Windsor Oil Company's Bank of Pleasant Hill 2, NE NE 29-9n-13w, which has spudded and set 10-inch casing at 42 feet; and the same company's Bank of Pleasant Hill 3 SE NE NE 29-9n-13w.

North Louisiana had three other new locations last week. In Bossier Parish, Plain Dealing Syndicate is rigging its fourth test on a 12,000-acre block, the new location being L. A. King 1, NW NE NE 36-23n-13w. Last week the same company on the same block abandoned S. H. Bolinger Company A-1, SW SE NW 31-23n-12w, as a salt water hole at 2804 feet. This well showed salt water in a formation test at 2751-76 feet and at 2775-80 feet with an oil show at 2751-79 feet. It logged top of Nacatosh at 1822 feet.

United Gas Public Service Company which has two tests drilling in the Rodessa gas field, Caddo Parish, made location for another test last week, Caddo Levee Board 2, located 1126 feet south and 25 feet east NWc 26-23n-16w. The same company last week cemented seven-inch casing at 5436 feet and is drilling below 5472 feet in Johnson 1, NE NE 26-23n-16w. Its Young 1, Section 21-23n-16w, is drilling below 2100 feet.

The Hunter Company (formerly Pelican Natural Gas Company) made location in Zwolle, Sabine Parish, for Sabine Lumber Company 15, center SW SW 1-7n-12w.

New Orleans Headquarters Louisiana Code Committee

Shreveport, La.—Headquarters of the Louisiana State Petroleum Code Committee of which J. A. Welch of Louisiana Oil Refining Corporation is chairman, and William A. Cook is executive secretary, will be moved to New Orleans from Shreveport in the near future, it was announced here last week.

Mr. Welch will remain in Shreveport. Mr. Cook going to New Orleans where he will have offices in the Union Building, and which will be in conjunction with those of the American Petroleum Industries Code committee of which Mr. Cook will also be secretary. M. A. Dyer of Texas Company, New Orleans, is chairman of the latter committee. Although Mr. Cook will open offices in New Orleans immediately the Shreveport office will not be entirely discontinued until June 1.

South Louisiana May Allowable Increased

Shreveport, La.—South Louisiana fields' oil allowable for May was increased 4050 barrels from April's allowable in the new month's pro-ration order promulgated last week by Dr. J. A. Shaw, director of the minerals division, Louisiana Conservation Commission, who makes the state's allocations. South Louisiana's allowable for May is 99,000 barrrels. North Louisiana's allowable which is not divided into fields was left unchanged at the April figure of 21,500 barrels.

JAMES R. BAHAN, 42, of Tyler, Texas, industrial representative for United Gas Public Service Company, died suddenly of heart attack in his room in a Shreveport, Louisiana, hotel, Sunday, April 28. Mr. Bahan was formerly assistant superintendent of the gas department of The Texas Company, with headquarters in Shreveport and later engaged in the gas business as a member of the firm of Bahan and Bahan, Shreveport. His wife survives. Interment was in Shreveport.

Rainbow City Deep Test Is Plugged Back

El Dorado, Arkansas.—After making Schlumberger and geophone tests in H. L. Hunt, Incorporated's E. F. Gregory 15, SE SE 10-17-14, in the Rainbow City fiield, Union County, results of which were not made public, this test, the second deepest ever drilled in Arkansas, last week was plugged back from 6911 feet in rock salt of Permian age to 4000 feet.

Casing was perforated and an attempt made to bring in the well at 3458 feet as a Taylor sand producer but the results were salt water, and the well is shut down waiting orders. There was a report current in oil circles, but not confirmed, that Lion Oil Refining Company, which drilled Arkansas' deepest test, Hayes A-9, Section 4-16-15, Union County, Smackover field, which was abandoned at 7255 feet in salt of Permian age, after setting a depth record for Arkansas, was negotiating for the E. F. Gregory 15 to deepen it after re-drilling plug.

Gulf Refining Company's Werner Lumber Company 49, SW NW SW 5-16-16, Union County, on the west side of the Smackover field, was drilling at 6075 feet.

Mississippi Getting Two New Wildcats

Jackson, Miss.—United Gas Public Service Company is curing title preparatory to making location for another deep test on its large block of wildcat holdings in Greene and George counties, southeast Mississippi, where it has been doing checking and rechecking seismograph work. The work has been done so thoroughly that some of the recording stations are only ten yards apart, it is said.

Sun Oil Company, which recently took a one half interest in a large block of wildcat acreage in Lamar County, south Mississippi, from E. B. Germany and has a core drilling crew working the block, is preparing to drill the second of a series of four core hole tests. A previous series of four core holes was drilled several months ago. Location for the new hole just ready to start, is NE SE 30-4n-15w.

State of Alabama Taking Oil Leases

Mobile, Ala.—Following extensive magnetometer work done by the Geological Survey of Alabama through the operations of Dr. J. Brian Eby, Houston, Texas, geophysicist and E. G.

Nicar, magnetometer operator, the State of Alabama has started taking exploration leases in Baldwin County, south Alabama. Dr. W. C. Mason is acting for the state in acquiring the exploration leases which are for one dollars and eighteen months to do the exploration work. The area being leased reaches from the north boundary of township 5 south, range two east and over a belt from six to eight miles inland around Mobile Bay to Ben Secours River.

R. D. Peteet of Foley, Alabama, recently acquired a checkerboarded block of 15,000 acres in Baldwin County, near Foley.

Two Wyoming Wildcat Tests Center Interest

Casper, Wyo.—Two wildcats that are holding the center of the spotlight in Wyoming activity on unproved structures are Ohio Oil Company and The California Oil Company's joint test on Big Medicine Bow, and the Mid-American Oil Company's test on Sheep Creek. The former well indicates that prolific oil production will be developed on Big Medicine in the Sundance sand, and the latter is the first wildcat in Wyoming to treat with acid.

Ohio Oil Company and The California Company's Kyle 1, NE SE NE 26-31n-79w, Carbon County, opened up a 36,000,000 cubic foot flow of wet gas in the Sundance formation between 515-5206 feet 10 days ago and on allowing to blow for a few hours to clean itself made several barrels of distillate. It is the opinion of Rocky Mountain geologists that well drilled into the crest of the sub-surface structure and is producing from a gas cap overlying a rich Sundance pool.

The two companies, which jointly control the 7000 acres covering the structure, are considering drilling another Sundance test several locations to the west of the present well. The well, which was due to complete as a gasser this week, is shut down fishing for two-inch drill stem, which twisted off on bottom. Rock pressure in the well gauged 1900 pounds. The 14¼-inch surface casing is set at 391 feet, and the well drilled 4768 feet of open hole, cementing the 7⅝-inch production casing at 5159 feet.

Mid-American Oil Company's Government 2, CNE SW 14-28n-92w, on Sheep Creek, Fremont County, which pumped 110 barrels initial from the Embar lime at 2175-2262 feet, a week ago, is running 1000 gallons of acid. The acid company truck made a trip of more than 800 miles to treat the well. Prior to shutting down of acid bath, the well pumped 60 barrels daily, on an eight-hour pumping schedule daily through the week.

Water Intrusion Endangers Cooper Field Producing Zone

Hobbs, New Mexico.—Separate committees of engineers and geologists have been pressed into service by operators in the Cooper field, one of the most important oil fields in Lea County, to make a study of the rapid spread of sulphur water into the oil horizon. Water has appeared recently in 13 of the 44 completed oil wells in the face of strict adherence to proration restrictions, which have been imposed since the oil zone was uncovered in March, 1934, by General Crude Oil Company and Magnolia Petroleum Company through the deepening of an old gasser on their jointly owned A. E. Meyers permit.

Water encroachment is endangering the flowing life of the field. A number of wells are showing from 30 to 40 percent cut oil in producing their flat allowable of 145 barrels daily during the last proration period in April. All wells are prorated equally. Individual well allocation has been scaled down from 225 barrels daily since the first completion. Oil drainage has not been sufficient to cause any appreciable spread of water. The source of trouble is believed to be largely due to excessive gas-oil ratios developed by some wells after being on production for a period through casing being set too high in the porous lime horizon, which yields a heavy flow of high pressure gas above the oil formation.

Representatives of companies operating in the field recently assembled at Fort Worth to launch a drive towards remedying the situation. Services of the Hobbs Engineering Committee, which has partially solved or relieved an identical situation that developed in the Hobbs field several years after it became a major source of production for New Mexico, has been enlisted to tackle the situation at Cooper. C. G. Staley, Lea County proration umpire, is chairman of this committee. The engineers partially halted the spread of water over the Hobbs structure through re-distribution of oil production allowables on given leases so as to lighten the drainage in low pressure areas determined by bottom-hole pressure readings. The committee was particularly successful in cutting down excessive gas-oil ratios through installation of packers on tubing, and by the same method cut down water intrusion in wells that were found to be making water from porous lime overlying the main oil source beds.

A committee of geologists have likewise been assigned to make a study of underground conditions and cooperate with the engineers in dealing with the water problem in the Cooper field, which

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When you have a GOTT Water Cooler handy, you will always be assured of a fresh supply of pure drinking water kept delightfully cool. Order one from your supply store . . . now!
Gott
WATER COOLER
GOTT Water Cans 1 gal. 3 gal. 5 gal. and 10 gal.
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H. P. GOTT MFG. CO., Winfield, Kansas
KEEP PURE DRINKING WATER ALWAYS HANDY

produces oil over an area extending four miles in a north and south direction, with a maximum width of one mile. However, it is generally conceded that it will eventually be linked with the North Jal field, as recent completions have shortened the gas between the two areas to 1½ miles, with no intermediate tests to condemn or prove.

Water encroachment upon the Cooper structure has swept across the north and south portions of the field, but the majority of the wells showing water are situated on the east, or the highest structural side of the field. Information developed at the Fort Worth meeting revealed that there is no relation between the water wells and sub sea depth of the wells, or their structural position. Instruments known as water witches are to be tried by the engineers in determining, if possible, the point of entry of the water into the bore hole of the wells.

Productive limits of the Cooper field advanced one half mile to the north the past week through the completion of Amerada Petroleum Corporation's J. L. Isbell 1, C SE NE 15-24s-36e, flowing 77 barrels of oil per hour through 1½-inch choke on 2½-inch tubing from lime at 3554 feet, or 175 feet below sea level. The gas-oil ratio was 395 to 1. Top of lime was logged at 3110 feet, or 269 feet above sea level. This well will require three offsets of Continental Oil Company and The California Company, joint operators. Amerada Petroleum Corporation has skidded rig to drill Isbell 2, C NE NE 15-24s-36e.

Eunice Field

Completion of a big well on the northwest flank of the Eunice structure was credited to Continental Oil Company and The California Company's A. E. Meyers 2-B-8, C NE NW 8-21s-36e, which flowed 130 barrels of oil per hour through open 5½-inch casing from lime at 3780-3817 feet, or 270 feet below sea level. The gas volume was estimated at 1,872,000 feet. This is the best producer in the north end. Tide Water Oil Company, Darby Petroleum Company and Devonian Oil Company's State-Foster 4, C NE NE 8-21s-36e, flowed 190 barrels oil and 5,136,000 feet of gas on initial test through open tubing from lime at 3887 feet, or 303 feet below sea level, and has been treated with 2000 gallons of acid solution to attain a higher oil yield.

Sun Oil Company has joined the ranks of the operating units in the Monument area, only oil strike made in Lea County this year, having made location on its 240-acre lease in Section 35-19s-36e, offsetting location in the southeast corner previously staked by Shell Petroleum Corporation. Superior Oil Company (California) is preparing to drill State 1, C NE NE 2-20s-36e, a west offset to the discovery well. Amerada Petroleum Corporation's State 1-F, C SW SW 36-19s-36e, north offset to its producer, has progressed to the 3530-foot level, and will set pipe within the next 200 feet. The Texas Pipe Line Company is slated to start running oil from the discovery well this week.

Canadian Refiners Increase Montana Crude Demand

Cut Bank, Mont.—Three tests starting in the Cut Bank field this week brought activity in the northern Montana field to the same point as the corresponding week of a year ago. There are 24 wells drilling in the field.

With field operations at a slump during the first three months of 1935, Cut Bank had its drilling wells nearly quadrupled since the first of April, and it is estimated that the field will see at least 150 wells by the close of the year. This prediction is based on the strengthening of the Canadian crude market for northern Montana oil.

It has been definitely established that the Canadian government will not remove the tariff on gasoline imported into Canada, and refineries in Alberta and Saskatcheman are resuming operations. Crude from northern Montana furnishes the main supply to these refineries. The raising of railroad rates in the United States further improves the Montana crude marketing situation to Canada, as it increases the cost of transporting gasoline into the Canadian market, while the crude oil from Cut Bank and Kevin-Sunburst is piped into Alberta.

The three new locations released this week are R. C. Tarrant's O'Brien 1, CSE SW 29-34n-5w; Consolidated Gas Company's Tribal 5, NEc Section 3-34n-6w; and Kately-Drumheller's Ward 2, Lot 2, Section 10-34n-6w.

Expect Quealy Dome Test To Pump 60 Barrels

Laramie, Wyo.—The California Company's Holst 1, NE SE SE 13-17n-77w, on Quealy Dome, 25 miles southeast of here, swabbed at the rate of 25 barrels per hour from five feet drilled in the Dakota sand with hole bottomed at 3237 feet. Oil tested 34.9 gravity Baume.

The wildcat drilled into 60 barrels daily production in the Muddy sand between 3140-75 feet last November, and was regarded as one of Wyoming's important wildcat strikes in 1934. The well shut down last winter after pumping 1000 barrels of crude from the Muddy, which was used as drilling fuel to deepen to the Dakota sand, operations for which started a week ago.

The company is running rods and tubing for a 10-day production test. The well, assumed drilling from 2166 feet in Government 2-S, CSL NE NW 14-56n-98w, which has been shut down for the past several weeks. Hole bottoms near its objective, the Peay sand (Frontier series).

Peay Sand Production Opens More Garland Acreage

Lovell, Wyo.—Opening up several thousand acres in the south fault block area of Garland Dome for oil development, Peay Oil Company's (formerly Crosby & Huntington Syndicate) Denio Mining & Milling Company 1, Tract 43-C, Section 14-55n-97w, drilled into light oil production in the Peay sand at 3216-3223 feet. The well flowed 200 barrels for the past five days and as the hole cleaned flow increased to 10 barrels per hour at late report.

The flow came through 223 feet of mud in the hole, and after the well has cleaned for two more days, crew will run the 8¼-inch production string to the top of the sand. The well is south of the fault, blocking off considerable acreage from the Garland field. It is 2½ miles southeast of the nearest production in the Garland field, a gas well completed in the Frontier. Below the Frontier series in South Garland lies the Pennsylvanian series, where major black oil production has been developed in the Garland field proper.

In the fault block area, north of the Garland field, Garland Oil Company re-

A new test is scheduled to start in the Garland district May 1. A group of Spokane business men have taken over the Howell lease, Lot 63, Township 55n, Range 97w, and have formed Joan Oil Company. The new company plans drilling two wells on the lease this year.

Two Finished and Two Start in Osage Field

Osage, Wyo.—Two wells completed and one test started in the Osage field, Weston County, Wyoming, this week. Irene Eaton's Fee 14, SW NE SW 30-34n-63w, pumped 20 barrels initial from a total depth of 1443 feet with hole bottomed in the Newcastle (Muddy) sand.

Osage Trust completed one and started one. The concern's Fee 26, CNE SE 14-46n-6w, pumped 25 barrels in the first 24 hours from 1610 feet. The new location is Fee 15-A, NWc NW SW 14-46n-64w.

according to present plans, will be completed in the Dakota, where it is estimated it will make 600 barrels daily on the pump.

The well was located by seismograph. The structure is anticlinal with its axis running on a northwest-southeast trend through Section 19-17n-76w, and Section 12- and 13-17n-77w, and contains approximately 2000 acres within the lowest closing contour.

Several years ago Matador Petroleum Company drilled a well in NW NW NE 13-17n-77w, on Quealy, but abandoned at 3600 feet after developing water in the Muddy and Dakota sands. The Texas Company drilled an offset to the Matador wildcat in NE NE NW 13-17n-77w, but lost hole at 3574 feet through mechanical difficulties.

Two Tests Start in Lance Creek Field

Lusk, Wyo.—Two new tests started this week in the defined limits of the Sundance pool in the Lance Creek oil field, Niobrara County, eastern Wyoming. Both wells will be completed in third bench of the Sundance sand where Ohio Oil Company recently opened up major light oil production in Rohlf 2.

Argo Oil Company of Denver is spudding Elliott 3, CNE NE 6-35n-6w, and Continental Oil Company is moving in rotary for Schuricht 2, CSE NE 6-35n-6w, a 40-acre location south of the Argo well.

Ohio Oil Company's recent start, Elizabeth Lamb 6, SE SE 36-36n-65w, another Sundance test, is drilling at 2038 feet. Rohlf 2, NE SE 32-36n-65w, is flowing 2300 barrels daily through the choke.

Mountain States Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MONTANA		
GLACIER COUNTY (Cut Bank Field)—		
Texas Co., Hinkle 6 ne ne 2-34-n-6w	90	2812
WYOMING		
WESTON COUNTY (Osage Field)—		
Osage Trust, Fee 26 ne se 14-46n-64w	25	1610
Irene Eaton, Fee 14 sw ne sw 30-46n-63w	20	1443
COLORADO		
MOFFAT COUNTY (Iles Dome)—		
Stanolind, Barkinson 28-X ne sw sw 22-4n-92w	1580	3420
NEW MEXICO		
LEA COUNTY (Cooper Field)—		
Amerada, J. L. Isbell 1, c se ne 15-24s-36e	5000	3554
LEA COUNTY (Eunice Field)—		
Continental & California Co., A. E. Meyer 2-B-8, c ne nw 8-21s-36e	3120	3817
LEA COUNTY (South Jal Field)—		
Texas-Amerada & Columbia Carbon, M. L. Parker 1, c nw nw 29-26s-37e	100	3248

*Failures; †Junked; ¶Million cu. ft. gas.

Playa del Rey Area May Be a Big Field

Los Angeles.—Apparently the Playa del Rey Extension of the old Venice field within the city limits of Los Angeles is to be more than an ordinary field extension, since new wells are coming in for production of 5000 barrels or more and the limits are yet undefined.

Chas. W. Fourl, who proved up the new area, recently completed his No. 3 hole for 5000 barrels of 22 gravity clean oil at 6545 feet, after landing seven-inch casing at 6170 feet. The flow is coming through 400 feet of 4¾-inch perforated, and probably would show a still greater production if permitted to flow open several days.

Union Oil Company completed Del Rey 8 for 200 barrels of 24.6 gravity oil at 3872 feet, but this hole is located 4000 feet north of the new area at the edge of the old Venice production. But Union Oil Company is in fine shape for some nice production from its Vidor Lease, 170 acres, south of the new area, but on the lowlands. The best wells are being completed on top of Playa del Rey Hills.

Four wells in the new area are nearing the completion stage, all below 6000 feet. Nineteen wells are drilling and at least six new ones will get started before May 10.

Since the new area is the city limits of Los Angeles, permits must be secured for the derrick, boilers and flow tanks. No oil can be hauled out in tank trucks and no well can be drilled on a site of less than one acre.

There is also a city ordinance against drilling a well too near the ocean, or near a main well-traveled street.

Production is coming from a true oil sand rather than conglomerate mixed with oil sand, as was the case in the old Venice townlot field.

The Union Oil Company is the only major company holding acreage in the new area.

California Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LONG BEACH—		
Cherry Hill Oil Co., Henshaw 2	250	4440
Medal Oil Co., Medal 1	35	4182
INGLEWOOD—		
Standard, Vickers 1-31	1320	3400
L. A. Inv. 72	750	3909
MONTEBELLO—		
Standard, Baldwin 77	275	5395
SANTA FE SPRINGS—		
General, Santa Fe 46-B	200	4563
VENICE—		
Chas. W. Fourl, No. 3	5000	6545
Pacific Dr. Co. No. 1	5800	6612
Union, Del Rey 8	185	3872
BUENA VISTA HILLS—		
Honolulu, No. 15	200	2984
EDISON—		
General, Leddy-Nichols 4	160	2551
Shell, Duff 3	120	3917
MOUNTAIN VIEW—		
Union, Kernco A-4	1400	5685
MOUNT POSO—		
Shell, Vedder 21	500	1823
Union S & M 17	625	1775
MESA—		
Fred Cole, No. 8	250	2016
KERN COUNTY—		
Badger Oil Co., El Tejon 1	*	6229
Associated, DiGiorgio 1	*	5501

*Failures; †Junked; ¶Million cu. ft. gas.

Montebello Field Is Again in Spotlight

Los Angeles.—Interest once more is centered on the Montebello field in Los Angeles County, due to penetration of about 70 feet of oil sand in Universal Consolidated Oil Company's N-2, with bottom at 5503 feet. This test is on the east edge of the old field and 8⅝-inch was cemented at 5425 feet.

A formation tester was placed at 5443 feet and in two minutes started flowing gas at 8,000,000 cubic feet rate and in 11 minutes started flowing oil. It is possible cement will be drilled out and a regular production test made by May 7, or earlier.

The Texas Company's City of Whittier 1 started drilling April 27 and is located about half a mile east of the Universal Consolidated Oil Company's test. No other locations have been announced, but if the well to be tested shows commercial production several wells will be started at once.

Gulf Will Test Old Area in California

Los Angeles. — Western Gulf Oil Company started Vail 1 near Bandini in Los Angeles County April 29 on a large acreage and it is understood it will be a deep test, probably much deeper than 5000 feet. In years past this area has been the scene of several wildcats, but all were abandoned.

One hole was drilled to 5000 feet and the operators were so sure of production they built storage tanks, a pipe line was laid to the railroad where the road had built a loading rack. But after weeks of efforts, the job was given up and abandoned.

California Employment Trend Continues Upward

Los Angeles.—Because of the tanker strike, total employment in the California oil industry declined slightly April 1, as compared to March 1, according to figures released by the California Oil & Gas Association. On April 1, employment was 51,089, against 51,162 as of March 1.

In point of employment in the oil industry, the bottom was reached in October, 1931, with 41,130 workers, and the trend has been upward since that time. The all-time record was 64,260 in February, 1929.

The averages for years follow:

Year	No. Employed
1928	59,769
1929	62,589
1930	55,742
1931	48,134
1932	43,081
1933	44,894
1934	49,918

Three Refiners Refuse To Sign New Agreement

Los Angeles.—Only three refiners or marketers who are governed by the Pacific Coast Petroleum Agency have failed to sign the supplementary agreement which is to be in force pending expiration of the existing agency agreement. Thirty-eight concerns have signed and are ready to post $10,000 in cash or in securities in good faith, if and when called upon to do so.

The cash deposit is intended to guarantee adherence to the new rules, provide certain expenses and can be drawn upon if any fines are assessed for certain infractions. The agreement provides for a fine of $500 for each day of violation of the agreement. By posting a large deposit, the new agreement becomes more binding than the previous one, as the teeth are in and ready for use.

The practice has been for the agency to purchase surplus gasoline from smaller refiners and this surplus is then sold to the larger companies. Under the new agreement, this surplus cannot be resold by the larger purchasing company to any member of the agency.

It is further provided that no marketing concern can distribute its product through more than one agency in a given area. In the past, in a few instances, products of one concern have been distributed in one area through as many as three agencies, or sales organizations.

A judicial committee composed of three persons has been set up and will be given arbitrary authority. This body is composed of Chas. R. Jones, vice president of Rio Grande Oil Company, representing member companies; C. A. Johnston, president of Socal Oil & Refining Company, representing the refiner group, and W. C. Van Fleet, general manager of the agency.

The supplemental agreement must have the approval of Secretary of the Interior Harold L. Ickes, but it is understood the present set up is agreeable to federal authorities.

The Retail Petroleum Dealers Association continues to demand that small independent service stations be permitted to retail independent gasoline through their pumps at one cent under the price charged for major company third grade, but so far this demand has not been agreed to.

New California Wells Far Ahead of Last Year

Los Angeles.—Notices of new wells to be started in California continue to show a marked increase over last year, until total of 274 new wells had been reported to April 20 this year, compared to 158 at same date in 1934. For the week ending April 20, total of 27 notices were filed, against 16 the previous week.

The latest batch of notices called for seven new holes for Long Beach, three for Playa del Rey, two for Inglewood and one each for Dominguez, Richfield and a wildcat for Los Angeles County. Fields in Kern County drew nine and one is starting at Kettleman Hills.

Deepening or redrilling jobs also are showing a large increase over the same period last year. So far this year, jobs of this type number 263 against 180 for the same period in 1934.

New Kentucky Field Is Causing Excitement

Fixer, Kentucky.—An exciting exploratory campaign is starting in Lee and Estill Counties, Kentucky, two and one-half miles northwest of the Big Sinking pool, and six miles from Pripe, Kentucky. There now are 11 strings of tools in operation, and leases have advanced from one dollar an acre to $15 per acre during the past six days.

Geologists are of the opinion that the pool may be about six miles long and approximately 4½ miles wide. The depth of the sand is 600 to 900 feet. It is considered the best prospect for a good oil pool found in eastern Kentucky in 14 years. Several wells have been completed, including one well that made 100 barrels in 12 hours. Other wells range in size from 15 barrels upwards, with the average well producing 50 barrels or more.

Petroleum Pipe Line Company has made connections and is running most of the oil.

Eastern Fields Completions

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
WASHINGTON COUNTY—		
Turman, Nuss & Co., Keys 1	¶	3307

WEST VIRGINIA

Company, Well and Location	Init. Prod. Bbls.	Depth
BOONE COUNTY—		
Owens-Illinois Glass Co., Peytona 23	¶	2795
ROANE COUNTY—		
Henderson Oil Co., E. S. Ball 2	2	....
Juston Cottle & Co., W. A. Davis 1	¶	....
RITCHIE COUNTY—		
William Morris & Co., Snyder 1	¶	2145
H. W. Colling, E. McGill 1	¶	2145
PLEASANTS COUNTY—		
M. J. Uhl & Co., L. Cordell 1	1	....
J. C. Hinds, J. C. Hinds 1	*	938
TYLER COUNTY—		
K. & A. Smith, Ira T. Hill 1	*	2276
LINCOLN COUNTY—		
Craddock Gas Co., Pratt Heirs 1	¶	1545
KANAWHA COUNTY—		
Lincoln Gas Co., Fred J. Thabet 6	¶	....

SOUTHEASTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
NOBLE COUNTY—		
T. & C. Rich, C. W. Hutchinson 3	¶	1342
MONROE COUNTY—		
Day O&G Co., Homer Burkhart 5	¶	2086
Robinson & Greene, Kate Baker 1	¶	1310
George Robinson & Co., Robinson 1	*	1853
WASHINGTON COUNTY—		
Kervin Corp., Foreman 17	*	530
Ohio F. G. Co., J. T. Lynch 1	¶	1050
Henning & Creighton, T. B. Sheperd 7	¶	1609
Harry Binegar, L. C. Moore 6	*	1967
W. F. Greelee & Co., Montgomery 24	*	1104

NORTHWESTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
MARION COUNTY—		
Clarion Oil Co., H. C. Barnhart 1	*	785
WYANDOT COUNTY—		
Murphy & Co., Hakes & Fox 2	¶	1519

CENTRAL OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
BELMONT COUNTY—		
Barnesville Dev. Co., Thornburg 2	*	1748
Union Gasoline Corp., Nick Dyken 2	5	1776
MEDINA COUNTY—		
O. K. O&G Co., T. W. Brinker 36	10	350
East Ohio Gas Co., E. S. Culp 1	*	3135
Ohio F. G. Co., Luella Walker 1	¶	....
MEIGS COUNTY—		
Bailey & Co., Chas. L. Bobo 1	*	1317
MUSKINGUM COUNTY—		
Hopewell O&G Co., A. F. Dozier 2	¶	4146
GUERNSEY COUNTY—		
W. H. Larrick & Co., DeGolia 1	3	3660
L. Sebo & Co., J. H. Hayman 1	*	1404
Frank Lyons & Co., K. Rich 1	5	1345
GALLIA COUNTY—		
Barton & Utsinger, W. T. & E. Miller 1	*	1275
HOCKING COUNTY—		
Ohio F. G. Co., S. CC. Co 118	¶	3527
TUSCARAWAS COUNTY—		
John Marks, John A. Hart 1	¶	1191
LICKING COUNTY—		
Armbruster & Stricker, Wm. Stricker 10	4	592
KNOX COUNTY—		
Ohio F. G. Co., Wm. Kaylor 1	*	2902
LORAIN COUNTY—		
J. W. Cushing, Harshow Chemical 1	¶	2308

*Failures; †Junked; ¶Million cu. ft. gas.

Drilling Reports on Important Wildcats

OKLAHOMA

ATOKA COUNTY—H. F. Potts' Nichols 1, sw sw nw 32-2s-9e, dr 2635 ft. Clark et al's Morrison 1, se se se 32-1n-14e, dr 200 ft. Keaton's Rowland 1-A, ne ne ne 18-13n-10e, dr 115 ft.

BECKHAM COUNTY—Fred Coogan et al's Shelton 1, sw sw sw 33-10n-25w, td 3608 ft, D & A.

BRYAN COUNTY—C. B. Welch's Colling 1, sw sw nw 19-8s-8e, ur 8-in csg 570 ft. Trio Oil Co.'s Gilbert 1, se se se 25-8s-7e, dr 521 ft.

CADDO COUNTY—Denver P. & R. Co.'s Sah-Cam 1, cse se 33-10n-10w, dr 3860 ft. H. W. Lee et al's Horton 1, ne ne ne 9-6n-13w, rust. Lee et al's Stacey Ferrell 1, sw ne ne 3-6n-13w, td 2280 ft.

CANADIAN COUNTY—Carl Larkin's Brobine 1, nw nw ne 33-13n-5w, dr 4976 ft.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 1, sw ne sw 27-2s-3w, dr 5314 ft. Waco Turner's Munson 1, ne nw ne 35-5s-2w, dr 2065 ft.

CHOCTAW COUNTY—Babcock's Nelson 1, nw nw nw 27-7s-17e, sd 864 ft. Burns et al's Hallum 1, ne nw nw 4-7s-20e, rust.

CLEVELAND COUNTY—Sinclair Prairie Oil Co.'s Franklin Community 1, se nw se 21-10n-2w, dr 6656 ft.

COAL COUNTY—Hudspeth et al's Schmelzer 1, ne sw ne 35-1n-8e, rig.

COMANCHE COUNTY—F. F. Stevens' Green 1, se se sw 2-1n-13w, dr 1487 ft. Henry Rosenthal et al's Au-chi-re-ah 1, "B," nw nw nw 5-1n-9w, dr 2140 ft.

GARVIN COUNTY—George Pace's Smith 1, sw sw ne 35-1n-1e, sd 2490 ft.

GRANT COUNTY — Helmerich-Payne's Crouse 1, cne sw 29-25n-8w, dr 6105 ft.

GREER COUNTY—Ent & Camp's Siminton 1, sw sw se 29-5n-21w, ru mach. Gled Oil Co.'s Luker 1, se se se 5-4n-21w, set 10-in csg 860 ft.

HARMON COUNTY—Jud Leath et al's McConnell 1, nw nw nw 22-3n-24w, waiting on dr water.

HUGHES COUNTY—Freeman et al's Kite 1-A, nw nw ne 8-6n-10e, sd 700 ft. Dandridge & Crane's Mead 1, nw nw ne 17-5n-9e, sd 1335 ft. Amerada Pet. Corp.'s Adams 1-A, ne ne sw 31-9n-9e, pb, flowed 60 bbls oil, 16 M gas. The Texas Co.'s Keaton 1, nw nw sw 4-8n-10e, spd.

JACKSON COUNTY—Palo Duro Oil Co.'s Ealum 1, se se sw 15-2n-21w, dr 1025 ft. Associated Oil Co.'s Harrell 1, ne ne sw 13-1s-21w, sd 1240 ft. Whatley & Whatley's Holt 1, nw sw se 20-1n-20w, td 1430 ft. Golden & Cochran's Duncan 1, sw sw ne 34-2n-21w, dr 2475 ft. Buell et al's Kizzar 1, se se ne 2-2n-22w, td 1740 ft. Triangle Oil Co.'s Fox 1, csl se nw 11-3n-20w, fsg 800 ft. Gypsy Oil Co.'s Boucher 1, nw sw nw 32-1n-19w, dr 1580 ft. Marshall & Burnham's Hess 1, ne ne sw ne 27-1s-20w, dr 690 ft. Jack Kilgore et al's Woolridge 1, se se ne 15-3n-21w, sd 2338 ft.

JEFFERSON COUNTY—Gypsy Oil Co.'s James 1, sw se se 30-6n-6e, dr 1005 ft.

KAY COUNTY—Harris-Haun's Schuessler 1, cnw sw 3-28n-2e, td 3710 ft, coring ahead. Lindsay's Waggoner 1, nw nw ne 3-27n-1e, br. Max Kelly's Spore 1, nw nw se 17-27n-2e, cellar.

KIOWA COUNTY—Henson & Patton's Beeler 1, ne ne ne 11-5n-15w, sd 517 ft. Buell & Herndon's Haught 1, se se ne 22-1n-16w, sd 841 ft.

LINCOLN COUNTY—Carter Oil Co.'s et al's McFarland C-38 1, sw sw ne 18-13n-4e, dr 4803 ft. Stanolind Oil & Gas Co. et al's Campbell 1, sw sw nw 3-14n-3e, coring 5064 ft. Carlock's Young 1, cn½ nw nw 23-15n-5e, rur. Stanolind Oil & Gas Co.'s Cavanaugh 1, se se ne 31-15n-5e, dr 2930 ft.

LOGAN COUNTY—Sinclair Prairie Oil Co.'s School Land 1, se se se 36-17n-1w, swab 377 bbls oil and flowed 425 bbls oil. Sinclair Prairie Oil Co. & Slick-Urschel's Koatsch 1, sw sw sw 23-15n-3w, set 4¾-in csg 6319 ft. Anderson-Kerr et al's Renfro 1, ne ne ne 33-16n-4w, dr 5525 ft. J. C. Shaffer's Hammond 1, se se sw 10-15n-4w, dr 6470 ft. Houghton Royalty's Langston 1, sw sw se 13-17n-1w, br. Mid-Continent's Community Nunn 1, se se nw 25-15n-1e, br.

LOVE COUNTY—Amerada Pet. Corp. & Stanolind Oil & Gas Co.'s Westheimer & Daube 1, nw se se 27-6n-2e, sd 790 ft.

MAJOR COUNTY—I.T.I.O. Co. & Continental Oil Co.'s Fairview 1, csw se 32-22n-14w, rog.

MARSHALL COUNTY—Paul Robb's Vittetoe 1, cne se 11-5s-4e, sd 5461 ft.

McCLAIN COUNTY — Anderson & Kerr's Newborn 1, nw sw ne 24-5n-3e, td 2941 ft, rust.

McCURTAIN COUNTY—Schrivner et al's Central Life Assn. Society 1, ne sw sw 24-6s-21e, set 8-in csg 587 ft, dr 872 ft.

MURRAY COUNTY—Manahan Oil Co.'s Ward 1, ne se nw 18-1s-3e, dr 1890 ft. Equitable Oil & Gas Co.'s Baer 1, sw nw nw 21-1s-3e, sd 1250 ft. Equitable Oil & Gas Co.'s Ferguson 1, ne ne sw 26-1s-3e, fsg 423 ft.

NOBLE COUNTY—Stanolind Oil & Gas Co., Amerada Pet. Corp. & Slick's Fuller 1, cse sw 34-20s-2w, td 5081 ft, 1000 gals acid, si.

OKFUSKEE COUNTY — Amerada Pet. Corp. et al's Jaynes 1, nw nw sw 20-10n-10e, pb 3883 ft, wocs.

OKLAHOMA COUNTY—Atkinson et al's Reed 1, ne ne ne 4-12n-3w, sso 6853 ft, coring 6944 ft. Gypsy Oil Co.'s Schock 1, nw sw sw 2-14n-3w, dr 5085 ft. Sinclair Prairie Oil Co.'s Corbett 1, ne nw ne 17-13n-3w, td 355 ft, r. Slick-Urschel et al's Owen Community 1, se se se 19-13n-3w, dr 1000 ft.

PAWNEE COUNTY—Trees Oil Co.'s Susan Wedd 1, cse se 27-24n-5e, dr 1335 ft.

PITTSBURG COUNTY—Gray et al's Lee 1, nw nw se 12-5n-13e, fsg 1210 ft.

PONTOTOC COUNTY — Paramount Oil Co.'s Graham 1, sw se sw 13-1n-7e, td 3478 ft, cement off bottom, wocs. Crabb-Craw Oil Co.'s Breco 1-A, se ne sw 3-4n-6e, sd. Cooper's Chandler 1, ne se sw 4-5n-6e, dr 1773 ft. Gillette & Kroeger's Duver 1, nw nw se 36-1n-6e, dr 1292 ft. Fleetborn Oil Corp.'s Oliver 1, ne nw se 21-4n-5e, td 2229 ft, pb 1665 ft, rum. Phillip Boyle's McCracken 1, ne nw nw 31-5n-4e, td 2170 ft, running 7-in csg. Marcum's Magnuson 1, sw se se 23-2n-7e, td 1930 ft, will rur & dd. Continental Oil Co.'s McCarthy 1, csw nw 12-1n-7e, ru.

POTTAWATOMIE COUNTY—James et al's Neal 1, nw se sw 4-5n-3e, swab 80 bbls oil 5 hrs, water broke through, recementing. Howard Sherman et al's Wingo 1, ne nw se 32-10n-5e, dr 4369 ft, sso.

PUSHMATAHA COUNTY—William Ungerman's Messer 1, se sw sw 35-3s-18e, td 2990 ft, pull 6-in csg.

SEMINOLE COUNTY—Sovereign Drilling Co. et al's Thomas 1, nw nw se 8-6n-7e, sd 3950 ft. Slick-Urschel's Baskin 1, ne ne sw 9-5n-6e, rust & sd.

STEPHENS COUNTY—Wm. Angle et al's Cooper 1, ne ne ne 35-1s-19w, dr 2688 ft.

TILLMAN COUNTY—Laper et al's Conrad 1, ne ne ne 35-1s-19w, sd 1320 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

• —*dry hole abandoned well.*	owdd —*old well drilling deeper.*
‡ —*salt water (completions).*	owpb —*old well plugging back.*
† —*junked and abandoned*	pb —*plugged back or plugging back.*
¶ —*million feet of gas.*	r —*reaming.*
abd —*abandoned.*	rog —*rig on the ground.*
bbls —*barrels.*	rur —*rigging up rotary tools.*
br —*building rig.*	rust —*rigging up standard tools.*
b.s. —*basic sediment.*	sd —*shut down.*
csg —*casing.*	sdtr —*sidetracking.*
co —*cleaning out.*	sg —*show gas.*
dd —*drilling deeper.*	si —*shut in.*
dk —*derrick.*	so —*show oil.*
dr —*drilling.*	so & g —*show oil and gas.*
fsg —*fishing.*	spd —*spudding.*
ft —*feet.*	sr —*straight reaming.*
hfw —*hole full of water.*	sw —*salt water.*
in —*inches.*	td —*total depth.*
lcn —*location.*	ur —*underreaming.*
m —*milling.*	wih —*water in the hole.*
mim —*moving in materials.*	wo —*workover.*
mit —*moving in tools.*	wocs —*waiting on cement to set.*
mot —*milling on tools.*	wosr —*waiting on standard rig.*
n, s, e, w, —*north, south, east, west*	
oih —*oil in hole.*	

KANSAS

BARBER COUNTY—Wentz's Skinner 1, cnw ne 29-31s-14w, rig.

BARTON COUNTY—Lario Oil & Gas Co. et al's Nuss 1, nw sw sw 11-16s-14w, dr 1330 ft. Wolf Creek's Kraft 1, sw sw sw 26-16s-11w, dr 3250 ft. Suppes & Witts' Hayes 1, sw sw sw 6-16s-14w, rig. McMorrow & Spencer's Hagen 1, ne ne ne 33-20s-11w, sd 3950 ft. Pryor & Lockhart's Herrington 1, ne ne nw 6-16s-12w, rig. Derby Oil Co. et al's State 1, ne se se 4-20s-11w, cored 3307-3326 ft, testing. Torry & Feaster's Feist 1, ne ne se 29-18s-11w, lcn.

BUTLER COUNTY—Emrich et al's Heorman 1, sw sw sw 20-26s-3e, spd. Ward McGinnes' Jackson 1, sw sw ne 26-25s-8e, ru.

COWLEY COUNTY—McCoy's Brandenburg 1, sw sw se 17-34s-5e, sd 2275 ft. Lloyd, Frost & Study's Weathered 1, sw se se 28-31s-3e, td 2126 ft, est 24 bbls oil. Ostat et al's Eckhardt 1, se se nw 15-35s-6e, spd & sd. Baden, Johnson, Roth & Farrout's David 1, ne ne sw 35-30s-4e, mim.

ELK COUNTY—Clay Pet. Co.'s Shambaugh 1, cne se 20-28s-9e, dr 2765 ft.

ELLSWORTH COUNTY—Carter Oil Co. et al's Teubner 1, se se nw 26-17s-9w, pumped 90 bbls oil 4 hrs. Pryor & Lockhart et al's Gregory 1, se se se 19-16s-8w, sd 3386 ft. Lario Oil & Gas Co. et al's Wright 1, sw sw ne 17-16s-8w, dr 3210 ft. Lario Oil & Gas Co. et al's Central National Bank 1, se se nw 33-15s-8w, spd. Lario Oil & Gas Co. et al's State 1, sw sw sw 29-15s-8w, so&g 2671-2678 ft, hfw 2695-2720 ft, ur 8-in csg 2750 ft. Western Exploration Co.'s Wilkins 1, nw sw nw 9-17s-9w, ru.

GREENWOOD COUNTY—Mullendore et al's Pedroje 1, ne ne sw 14-23s-11e, dr 400 ft.

HARVEY COUNTY—Twin Drilling Co. et al's Ruth 1, sw sw sw 16-22s-2w, hfw 2370-2385 ft, ur 8-in csg 2400 ft. Goering Brothers' Brainard 1, ne ne sw 2-23s-2w, dr 135 ft. Hartman & Blair's Elberson 1, nw nw nw 15-24s-3w, cellar. H. H. & S. Oil Co.'s Buller 1, ne ne se 31-23s-2w, pits. Cameron, Derby & Trees' Brainard 1, sw se nw 19-24s-2e, dr 1790 ft. Winkler-Koch et al's Mueller 1, se sw nw 15-23s-2w, spd. Lauck et al's Baller 1, sw sw sw 29-24s-1e, dr 630 ft.

McPHERSON COUNTY—Lario Oil & Gas Co.'s Base 1, sw sw sw 22-20s-2w, sd 3562 ft. Palmer Oil Corp.'s Swenson 1, ne ne sw 11-18s-3w, dr 3018 ft. Brosius et al's Hanson 1, nw nw sw 15-17s-2w, sd 1108 ft. Shell Pet. Corp.'s Wenger 1, ne ne ne 2-20s-1w, 225 bbls fluid 10 hrs. W. C. McBride's Mugler 1, se sw sw 22-20s-3w, co 2866 ft.

NESS COUNTY—Phillips Pet. Co.'s Young 1, cnw sw 13-18s-21w, td 3649 ft, rust. Atlantic Oil Co.'s Mark "A" 1, cse se 28-20s-23w, dr 1550 ft.

OSAGE COUNTY—Jim Edwards' Deitrick 1, cnw se 21-14s-15e, so&g 783-800 ft.

PAWNEE COUNTY—Atlantic Oil Co.'s Slepake 1, cne ne 15-23s-17w, dr 3500 ft.

RENO COUNTY—Privett Drilling Co.'s Crotts 1, ne nw ne 27-26s-10w, fsg 4338 ft. Bradley's Olmstead 1, sw sw sw 22-22s-7w, rog. Mylius et al's Sprowl 1, ne nw ne 1-24s-5w, rig.

RICE COUNTY—Allison & Fitzwilliams et

California Employment Trend Continues Upward

Los Angeles.—Because of the tanker strike, total employment in the California oil industry declined slightly April 1, as compared to March 1, according to figures released by the California Oil & Gas Association. On April 1, employment was 51,089, against 51,162 as of March 1.

In point of employment in the oil industry, the bottom was reached in October, 1931, with 41,130 workers, and the trend has been upward since that time. The all-time record was 64,260 in February, 1929.

The averages for years follow:

Year	No. Employed
1928	59,769
1929	62,589
1930	55,742
1931	48,134
1932	43,081
1933	44,894
1934	49,918

Three Refiners Refuse To Sign New Agreement

Los Angeles.—Only three refiners or marketers who are governed by the Pacific Coast Petroleum Agency have failed to sign the supplementary agreement which is to be in force pending expiration of the existing agency agreement. Thirty-eight concerns have signed and are ready to post $10,000 in cash or in securities in good faith, if and when called upon to do so.

The cash deposit is intended to guarantee adherence to the new rules, provide certain expenses and can be drawn upon if any fines are assessed for certain infractions. The agreement provides for a fine of $500 for each day of violation of the agreement. By posting a large deposit, the new agreement becomes more binding than the previous one, as the teeth are in and ready for use.

The practice has been for the agency to purchase surplus gasoline from smaller refiners and this surplus is then sold to the larger companies. Under the new agreement, this surplus cannot be resold by the larger purchasing company to any member of the agency.

It is further provided that no marketing concern can distribute its product through more than one agency in a given area. In the past, in a few instances, products of one concern have been distributed in one area through as many as three agencies, or sales organizations.

A judicial committee composed of three persons has been set up and will be given arbitrary authority. This body is composed of Chas. R. Jones, vice president of Rio Grande Oil Company, representing member companies; C. A. Johnston, president of Socal Oil & Refining Company, representing the refiner group, and W. C. Van Fleet, general manager of the agency.

The supplemental agreement must have the approval of Secretary of the Interior Harold L. Ickes, but it is understood the present set up is agreeable to federal authorities.

The Retail Petroleum Dealers Association continues to demand that small independent service stations be permitted to retail independent gasoline through their pumps at one cent under the price charged for major company third grade, but so far this demand has not been agreed to.

New California Wells Far Ahead of Last Year

Los Angeles.—Notices of new wells to be started in California continue to show a marked increase over last year, until total of 274 new wells had been reported to April 20 this year, compared to 158 at same date in 1934. For the week ending April 20, total of 27 notices were filed, against 16 the previous week.

The latest batch of notices called for seven new holes for Long Beach, three for Playa del Rey, two for Inglewood and one each for Dominguez, Richfield and a wildcat for Los Angeles County. Fields in Kern County drew nine and one is starting at Kettleman Hills.

Deepening or redrilling jobs also are showing a large increase over the same period last year. So far this year, jobs of this type number 263 against 180 for the same period in 1934.

New Kentucky Field Is Causing Excitement

Fixer, Kentucky.—An exciting exploratory campaign is starting in Lee and Estill Counties, Kentucky, two and one-half miles northwest of the Big Sinking pool, and six miles from Pripe, Kentucky. There now are 11 strings of tools in operation, and leases have advanced from one dollar an acre to $15 per acre during the past six days.

Geologists are of the opinion that the pool may be about six miles long and approximately 4½ miles wide. The depth of the sand is 600 to 900 feet. It is considered the best prospect for a good oil pool found in eastern Kentucky in 14 years. Several wells have been completed, including one well that made 100 barrels in 12 hours. Other wells range in size from 15 barrels upwards, with the average well producing 50 barrels or more.

Petroleum Pipe Line Company has made connections and is running most of the oil.

Eastern Fields Completions

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
WASHINGTON COUNTY—		
Turman, Nuss & Co., Keys 1.....	¶	3307

WEST VIRGINIA

Company, Well and Location	Init. Prod. Bbls.	Depth
BOONE COUNTY—		
Owens-Illinois Glass Co., Peytona 23	¶	2795
ROANE COUNTY—		
Henderson Oil Co., E. S. Ball 2...	2	....
Juston Cottle & Co., W. A. Davis 1	¶	....
RITCHIE COUNTY—		
William Morris & Co., Snyder 1...	¶	2145
H. W. Colling, E. McGill 1.....	¶	2145
PLEASANTS COUNTY—		
M. J. Uhl & Co., L. Cordell 1....	1	....
J. C. Hinds, J. C. Hinds 1.....	*	938
TYLER COUNTY—		
K. & A. Smith, Ira T. Hill 1.....	*	2276
LINCOLN COUNTY—		
Craddock Gas Co., Pratt Heirs 1..	¶	1545
KANAWHA COUNTY—		
Lincoln Gas Co., Fred J. Thabet 6	¶	....

SOUTHEASTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
NOBLE COUNTY—		
T. & C. Rich, C. W. Hutchinson 3	¶	1342
MONROE COUNTY—		
Day O&G Co., Homer Burkhart 5	¶	2086
Robinson & Greene, Kate Baker 1..	¶	1310
George Robinson & Co., Robinson 1	*	1853
WASHINGTON COUNTY—		
Kervin Corp., Foreman 17.....	*	530
Ohio F. G. Co., J. T. Lynch 1.....	¶	1050
Henning & Creighton, T. B. Sheperd 7	¶	1609
Harry Binegar, L. C. Moore 6.....	*	1967
W. F. Greelee & Co., Montgomery 24	*	1104

NORTHWESTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
MARION COUNTY—		
Clarion Oil Co., H. C. Barnhart 1	*	785
WYANDOT COUNTY—		
Murphy & Co., Hakes & Fox 2...	¶	1519

CENTRAL OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
BELMONT COUNTY—		
Barnesville Dev. Co., Thornburg 2	*	1748
Union Gasoline Corp., Nick Dyken 2	5	1776
MEDINA COUNTY—		
O. K. O&G Co., T. W. Brinker 36..	10	350
East Ohio Gas Co., E. S. Culp 1..	*	3135
Ohio F. G. Co., Luella Walker 1..	¶	....
MEIGS COUNTY—		
Bailey & Co., Chas. L. Bobo 1....	*	1317
MUSKINGUM COUNTY—		
Hopewell O&G Co., A. F. Dozier 2	¶	4146
GUERNSEY COUNTY—		
W. H. Larrick & Co., DeGolia 1..	3	3660
L. Sebo & Co., J. H. Hayman 1..	*	1404
Frank Lyons & Co., K. Rich 1...	5	1345
GALLIA COUNTY—		
Barton & Utsinger, W. T. & E. Miller 1	*	1275
HOCKING COUNTY—		
Ohio F. G. Co., S. CC. Co 118..	¶	3527
TUSCARAWAS COUNTY—		
John Marks, John A. Hart 1.....	¶	1191
LICKING COUNTY—		
Armbruster & Stricker, Wm. Stricker 10	4	592
KNOX COUNTY—		
Ohio F. G. Co., Wm. Kaylor 1...	*	2902
LORAIN COUNTY—		
J. W. Cushing, Harshow Chemical 1	¶	2308

*Failures; †Junked; ¶Million cu. ft. gas.

Drilling Reports on Important Wildcats

OKLAHOMA

ATOKA COUNTY—H. F. Potts' Nichols 1, sw sw nw 32-2s-9e, dr 2635 ft. Clark et al's Morrison 1, se se se 32-1n-14e, dr 200 ft. Keaton's Rowland 1-A, ne ne ne 18-13n-10e, dr 115 ft.

BECKHAM COUNTY—Fred Coogan et al's Shelton 1, sw sw sw 33-10n-25w, td 3608 ft, D & A.

BRYAN COUNTY—C. B. Welch's Colling 1, sw sw nw 19-8s-8e, ur 8-in csg 570 ft. Trio Oil Co.'s Gilbert 1, se se se 25-8s-7e, dr 521 ft.

CADDO COUNTY—Denver P. & R. Co.'s Sah-Cam 1, cse se 33-10n-10w, dr 3860 ft. H. W. Lee et al's Horton 1, ne ne ne 9-6n-13w, rust. Lee et al's Stacey Ferrell 1, sw ne ne 3-6n-13w, td 2280 ft.

CANADIAN COUNTY—Carl Larkin's Brobine 1, nw nw ne 33-13n-5w, dr 4976 ft.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 1, sw ne sw 27-2s-3w, dr 5314 ft. Waco Turner's Munson 1, ne nw ne 35-5s-2w, dr 2065 ft.

CHOCTAW COUNTY—Babcock's Nelson 1, nw nw nw 27-7s-17e, sd 864 ft. Burns et al's Hallum 1, ne nw nw 4-7s-20e, rust.

CLEVELAND COUNTY—Sinclair Prairie Oil Co.'s Franklin Community 1, se nw se 21-10n-2w, dr 6656 ft.

COAL COUNTY—Hudspeth et al's Schmelzer 1, ne sw ne 35-1n-8e, rig.

COMANCHE COUNTY—F. F. Stevens' Green 1, se se sw 2-1n-13w, dr 1487 ft. Henry Rosenthal et al's Au-chi-re-ah 1, "B," nw nw nw 5-1n-9w, dr 2140 ft.

GARVIN COUNTY—George Pace's Smith 1, sw sw ne 35-1n-1e, sd 2490 ft.

GRANT COUNTY — Helmerich-Payne's Crouse 1, cne sw 29-25n-8w, dr 6105 ft.

GREER COUNTY—Ent & Camp's Siminton 1, sw sw se 29-5n-21w, ru mach. Gled Oil Co.'s Luker 1, se se se 5-4n-21w, set 10-in csg 860 ft.

HARMON COUNTY—Jud Leath et al's McConnell 1, nw nw nw 22-3n-24w, waiting on dr water.

HUGHES COUNTY—Freeman et al's Kite 1-A, nw nw ne 8-6n-10e, sd 700 ft. Dandridge & Crane's Mead 1, nw nw ne 17-5n-9e, sd 1335 ft. Amerada Pet. Corp.'s Adams 1-A, ne ne sw 31-9n-9e, pb, flowed 60 bbls oil, 16 M gas. The Texas Co.'s Keaton 1, nw nw sw 4-8n-10e, spd.

JACKSON COUNTY—Palo Duro Oil Co.'s Ealum 1, se se sw 15-2n-21w, dr 1025 ft. Associated Oil Co.'s Harrell 1, ne ne sw 13-1s-21w, sd 1240 ft. Whatley & Whatley's Holt 1, nw sw se 20-1n-20w, td 1430 ft. Golden & Cochran's Duncan 1, sw sw ne 34-2n-21w, dr 2475 ft. Buell et al's Kizzar 1, se se ne 2-2n-22w, td 1740 ft. Triangle Oil Co.'s Fox 1, csl se nw 11-3n-20w, fsg 800 ft. Gypsy Oil Co.'s Boucher 1, nw sw nw 32-1n-19w, dr 1580 ft. Marshall & Burnham's Hess 1, ne ne sw ne 27-1s-20w, dr 690 ft. Jack Kilgore et al's Woolridge 1, se se ne 15-3n-21w, sd 2338 ft.

JEFFERSON COUNTY—Gypsy Oil Co.'s James 1, sw se se 30-6n-6e, dr 1005 ft.

KAY COUNTY—Harris-Haun's Schuessler 1, cnw sw 3-28n-2e, td 3710 ft, coring ahead. Lindsay's Waggoner 1, nw nw ne 3-27n-1e, br. Max Kelly's Spore 1, nw nw se 17-27n-2e, cellar.

KIOWA COUNTY—Henson & Patton's Beeler 1, ne ne ne 11-5n-15w, sd 517 ft. Buell & Herndon's Haught 1, se se ne 22-1n-16w, sd 841 ft.

LINCOLN COUNTY—Carter Oil Co.'s et al's McFarland C-38 1, sw sw ne 18-13n-4e, dr 4803 ft. Stanolind Oil & Gas Co. et al's Campbell 1, sw sw nw 3-14n-3e, coring 5064 ft. Carlock's Young 1, cn½ nw nw 23-15n-5e, rur. Stanolind Oil & Gas Co.'s Cavanaugh 1, se se ne 31-15n-5e, dr 2930 ft.

LOGAN COUNTY—Sinclair Prairie Oil Co.'s School Land 1, se se se 36-17n-1w, swab 377 bbls oil and flowed 425 bbls oil. Sinclair Prairie Oil Co. & Slick-Urschel's Koatsch 1, sw sw sw 23-15n-3w, set 4¾-in csg 6319 ft. Anderson-Kerr et al's Renfro 1, ne ne ne 33-16n-4w, dr 5525 ft. J. C. Shaffer's Hammond 1, se se sw 10-15n-4w, dr 6470 ft. Houghton Royalty's Langston 1, sw sw se 13-17n-1w, br. Mid-Continent's Community Nunn 1, se se nw 25-15n-1e, br.

LOVE COUNTY—Amerada Pet. Corp. & Stanolind Oil & Gas Co.'s Westheimer & Daube 1, nw se se 27-6n-2e, sd 790 ft.

MAJOR COUNTY—I.T.I.O. Co. & Continental Oil Co.'s Fairview 1, csw se 32-22n-14w, rog.

MARSHALL COUNTY—Paul Robb's Vittetoe 1, cne se 11-5s-4e, sd 5461 ft.

McCLAIN COUNTY — Anderson & Kerr's Newborn 1, nw sw ne 24-5n-3e, td 2941 ft, rust.

McCURTAIN COUNTY—Schrivner et al's Central Life Assn. Society 1, ne sw sw 24-6s-21e, set 8-in csg 587 ft, dr 872 ft.

MURRAY COUNTY—Manahan Oil Co.'s Ward 1, ne se nw 18-1s-3e, dr 1890 ft. Equitable Oil & Gas Co.'s Baer 1, sw nw nw 21-1s-3e, sd 1250 ft. Equitable Oil & Gas Co.'s Ferguson 1, ne ne sw 26-1s-3e, fsg 423 ft.

NOBLE COUNTY—Stanolind Oil & Gas Co., Amerada Pet. Corp. & Slick's Fuller 1, cse sw 34-20s-2w, td 5081 ft, 1000 gals acid, si.

OKFUSKEE COUNTY — Amerada Pet. Corp. et al's Jaynes 1, nw nw sw 20-10n-10e, pb 3883 ft, wocs.

OKLAHOMA COUNTY—Atkinson et al's Reed 1, ne ne ne 4-12n-3w, sso 6853 ft, coring 6944 ft. Gypsy Oil Co.'s Schock 1, nw sw sw 2-14n-3w, dr 5085 ft. Sinclair Prairie Oil Co.'s Corbett 1, ne nw ne 17-13n-3w, td 355 ft, r. Slick-Urschel et al's Owen Community 1, se se se 19-13n-3w, dr 1000 ft.

PAWNEE COUNTY—Trees Oil Co.'s Susan Wedd 1, cse se 27-24n-5e, dr 1335 ft.

PITTSBURG COUNTY—Gray et al's Lee 1, nw nw se 12-5n-13e, fsg 1210 ft.

PONTOTOC COUNTY — Paramount Oil Co.'s Graham 1, sw se sw 13-1n-7e, td 3478 ft, cement off bottom, wocs. Crabb-Craw Oil Co.'s Breco 1-A, se ne sw 3-4n-6e, sd. Cooper's Chandler 1, ne se sw 4-5n-6e, dr 1773 ft. Gillette & Kroeger's Duver 1, nw nw se 36-1n-6e, dr 1292 ft. Fleetborn Oil Corp.'s Oliver 1, ne nw se 21-4n-5e, td 2229 ft, pb 1665 ft, rum. Phillip Boyle's McCracken 1, ne nw nw 31-5n-4e, td 2170 ft, running 7-in csg. Marcum's Magnuson 1, sw se se 23-2n-7e, td 1930 ft, will rur & dd. Continental Oil Co.'s McCarthy 1, csw nw 12-1n-7e, ru.

POTTAWATOMIE COUNTY—James et al's Neal 1, nw se sw 4-5n-3e, swab 80 bbls oil 5 hrs, water broke through, recementing. Howard Sherman et al's Wingo 1, ne nw se 32-10n-5e, dr 4369 ft, sso.

PUSHMATAHA COUNTY—William Ungerman's Messer 1, se sw sw 35-3s-18e, td 2990 ft, pull 6-in csg.

SEMINOLE COUNTY—Sovereign Drilling Co. et al's Thomas 1, nw nw se 8-6n-7e, sd 3950 ft. Slick-Urschel's Baskin 1, ne ne sw 9-5n-6e, rust & sd.

STEPHENS COUNTY—Wm. Angle et al's Cooper 1, ne ne ne 35-1s-19w, dr 2688 ft.

TILLMAN COUNTY—Laper et al's Conrad 1, ne ne ne 35-1s-19w, sd 1320 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

* —*dry hole abandoned well.*
‡ —*salt water (completions).*
† —*junked and abandoned*
¶ —*million feet of gas.*
abd —*abandoned.*
bbls —*barrels.*
br —*building rig.*
b.s. —*basic sediment.*
csg —*casing.*
co —*cleaning out.*
dd —*drilling deeper.*
dk —*derrick.*
dr —*drilling.*
fsg —*fishing.*
ft —*feet.*
hfw —*hole full of water.*
in —*inches.*
lcn —*location.*
m —*milling.*
mim —*moving in materials.*
mit —*moving in tools.*
mot —*milling on tools.*
n, s, e, w, —*north, south, east, west*
oih —*oil in hole.*
owdd —*old well drilling deeper.*
owpb —*old well plugging back.*
pb —*plugged back or plugging back.*
r —*reaming.*
rog —*rig on the ground.*
rur —*rigging up rotary tools.*
rust —*rigging up standard tools.*
sd —*shut down.*
sdtr —*sidetracking.*
sg —*show gas.*
si —*shut in.*
so —*show oil.*
so & g —*show oil and gas.*
spd —*spudding.*
sr —*straight reaming.*
sw —*salt water.*
td —*total depth.*
ur —*underreaming.*
wih —*water in the hole.*
wo —*workover.*
wocs —*waiting on cement to set.*
wosr —*waiting on standard rig.*

KANSAS

BARBER COUNTY—Wentz's Skinner 1, cnw ne 29-31s-14w, rig.

BARTON COUNTY—Lario Oil & Gas Co. et al's Nuss 1, nw sw sw 11-16s-14w, dr 1330 ft. Wolf Creek's Kraft 1, sw sw sw 26-16s-11w, dr 3250 ft. Suppes & Witts' Hayes 1, sw sw sw 6-16s-14w, rig. McMorrow & Spencer's Hagen 1, ne ne ne 33-20s-11w, sd 3950 ft. Pryor & Lockhart's Herrington 1, ne ne nw 6-16s-12w, rig. Derby Oil Co. et al's State 1, ne se se 4-20s-11w, cored 3307-3326 ft, testing. Torry & Feaster's Feist 1, ne ne se 29-18s-11w, lcn.

BUTLER COUNTY—Emrich et al's Heorman 1, sw sw sw 20-26s-3e, spd. Ward McGinnes' Jackson 1, sw sw ne 26-25s-8e, ru.

COWLEY COUNTY—McCoy's Brandenburg 1, sw sw se 17-34s-5e, sd 2275 ft. Lloyd, Frost & Study's Weathered 1, sw se se 28-31s-3e, td 2126 ft, est 24 bbls oil. Ostat et al's Eckhardt 1, se se nw 15-35s-6e, spd & sd. Baden, Johnson, Roth & Farrout's David 1, ne ne sw 35-30s-4e, mim.

ELK COUNTY—Clay Pet. Co.'s Shambaugh 1, cne se 20-28s-9e, dr 2765 ft.

ELLSWORTH COUNTY—Carter Oil Co. et al's Teubner 1, se se nw 26-17s-9w, pumped 90 bbls oil 4 hrs. Pryor & Lockhart et al's Gregory 1, se se se 19-16s-8w, sd 3386 ft. Lario Oil & Gas Co. et al's Wright 1, sw sw ne 17-16s-8w, dr 3210 ft. Lario Oil & Gas Co. et al's Central National Bank 1, se se nw 33-15s-8w, spd. Lario Oil & Gas Co. et al's State 1, sw sw sw 29-15s-8w, so&g 2671-2678 ft, hfw 2695-2720 ft, ur 8-in csg 2750 ft. Western Exploration Co.'s Wilkins 1, nw sw nw 9-17s-9w, ru.

GREENWOOD COUNTY—Mullendore et al's Pedroje 1, ne ne sw 14-23s-11e, dr 400 ft.

HARVEY COUNTY—Twin Drilling Co. et al's Ruth 1, sw sw sw 16-22s-2w, hfw 2370-2385 ft, ur 8-in csg 2400 ft. Goering Brothers' Brainard 1, ne ne sw 2-23s-2w, dr 135 ft. Hartman & Blair's Elberson 1, nw nw nw 15-24s-3w, cellar. H. H. & S. Oil Co.'s Buller 1, ne ne se 31-23s-2w, pits. Cameron, Derby & Trees' Brainard 1, sw se nw 19-24s-2e, dr 1790 ft. Winkler-Koch et al's Mueller 1, se sw nw 15-23s-2w, spd. Lauck et al's Baller 1, sw sw sw 29-24s-1e, dr 630 ft.

McPHERSON COUNTY—Lario Oil & Gas Co.'s Base 1, sw sw sw 22-20s-2w, sd 3562 ft. Palmer Oil Corp.'s Swenson 1, ne ne sw 11-18s-3w, dr 3018 ft. Brosius et al's Hanson 1, nw nw sw 15-17s-2w, sd 1108 ft. Shell Pet. Corp.'s Wenger 1, ne ne ne 2-20s-1w, 225 bbls fluid 10 hrs. W. C. McBride's Mugler 1, se sw sw 22-20s-3w, co 2866 ft.

NESS COUNTY—Phillips Pet. Co.'s Young 1, cnw sw 13-18s-21w, td 3649 ft, rust. Atlantic Oil Co.'s Mark "A" 1, cse se 28-20s-23w, dr 1550 ft.

OSAGE COUNTY—Jim Edwards' Deitrick 1, cnw se 21-14s-15e, so&g 783-800 ft.

PAWNEE COUNTY—Atlantic Oil Co.'s Slepake 1, cne ne 15-23s-17w, dr 3500 ft.

RENO COUNTY—Privett Drilling Co.'s Crotts 1, ne nw ne 27-26s-10w, fsg 4338 ft. Bradley's Olmstead 1, sw sw sw 22-22s-7w, rog. Mylius et al's Sprowl 1, ne nw ne 1-24s-5w, rig.

RICE COUNTY—Allison & Fitzwilliams et

al's Stumps 1, nw nw sw 4-18s-10w, woc 3261 ft. Foraker-Nickerson et al's Lyon 1, se se ne 27-20s-8w, hfw 3500-2311 ft, dr 3560 ft. Vickers Pet. Co. et al's Gouldner 1, se ne nw 16-18s-9w, co 2060 ft. Day's Mason 1, nw ne ne 28-21s-7w, dr 2000 ft. Gypsy Oil Co.'s Kessling 1, nw nw sw 10-20s-9w, td 3261 ft, pumped 201 bbls oil, treated with 1000 gals acid, waiting on acid reaction. Fee et al's Reiss 1, nw nw ne 24-19s-9w, lcn. Fred Rust et al's Brown 1, ne ne ne 16-21s-6w, rig.

ROOKS COUNTY—Smith & Ash's Nelson 1, nw nw ne 27-10s-16w, sd 50 ft. Trees Oil & Findeiss' Johnson 1, sw sw se 26-10s-19w, dr 525 ft. Stearns-Streeter et al's Hoskins 1, se sw se 34-9s-16w, dr 3523 ft.

RUSH COUNTY—Lario Oil & Gas Co. & Phillips Pet. Co.'s Benbow 1, nw ne ne 12-17s-19w, co 3790 ft. Boyle & Grossman et al's Yost 1, csw sw 23-17s-18w, fsg 335 ft. El Dorado Refining Co.'s Stang 1, se se nw 36-17s-17w, br. Morgan & Flynn et al's Schlegel 1, se se nw 26-17s-16w, dr 2690 ft.

RUSSELL COUNTY—Wolf Creek et al's Penn Mutual 1, sw sw sw 22-15s-15w, dr 1980 ft. Murphin's Funk 1, sw sw sw 19-12s-13w, fsg 3040 ft. Reserve et al's Moore 1, cnw nw sw 15-13s-12w, rog. Hartman & Blair's Hildebrandt 1, nw ne sw 12-14s-14w, td 3086 ft, pulling 8-in csg. Vernon & Murphin's Becker 1, ne ne ne 33-15s-14w, ru. Ryan Pet. Co.'s Newbold 1, nw se ne 25-12s-15w, ur 8-in csg 2390 ft. Kirk & Jones' Milberger 1, ne nw nw 7-14s-14w, dr 3200 ft. Pryor & Lockhart's Spicer 1, ne ne se 21-11s-15w, mim.

SALINE COUNTY—Dieter et al's Herrington 1, ne nw se 3-13s-1w, sd 3289 ft.

SEDGWICK COUNTY — Western Kansas Oil & Refining Co. et al's Betzen 1, se se ne 17-16s-13w, dr 3160 ft.

STRATFORD COUNTY—Lario Oil & Gas Co. et al's Tudor Morgan 1, se se nw 23-24s-13w, pumped 342 bbls oil. Davis et al's Riley 1, se se se 19-22s-11w, ru.

SUMNER COUNTY—Shell Pet. Corp.'s Green 1, se sw nw 3-33s-2e, dr 2759 ft. Allison & Fitzwilliams et al's Hitchcock 1-B, se se nw 16-30s-1w, lcn.

TREGO COUNTY—Jenmar Oil Co.'s Jones 1, se se se 20-12s-23w, sd 3890 ft.

WOODSON COUNTY—Foster & Schultz's Ferguson 1, cs½ ne sw 12-26s-13e, dr 1200 ft.

CALIFORNIA

KERN COUNTY

ALPAUGH—Trico O & G Co's No. 4, 3-25-23, rig.

ARVIN—General's Mattson 1, 1-32-29, dr sand and shale 2510 ft. Hall-Baker Co's core hole 4-4, to test 1270 ft.

BELRIDGE—Continental's Mayhan 1, 7-28-20, dr sand and shale 2755 ft.

BUENA VISTA LAKE—Shell's B. V. A. 1, 9-32-25, coring sand and shale 6033 ft.

CALIENTE—Signal O & G Co's S. P. Land 1, 31-29-30, sd 2290 ft. Woodward Oil Co's Batz 1, 36-29-20, dr sandy shale and gray sand 615 ft; S. P. 2, 31-29-30, to test 497 ft.

COMANCHE POINT—Tejon Ridge Oil Co's No. 1, 23-32-29 dr hard shell 1757 ft.

EDISON—Mountain View Dev. Corp's Spangler 1, 12-30-28, bailed 50 bbls, sanded up co. Woodward Oil Co's Goldberg 1, 36-29-29, lcn.

GREENFIELD—Big McKittrick Oil Co's Houghton 1, 7-31-28, dr shale 5712 ft.

KERNELL—Standard's Richout 1, 34-24-23, lcn; Widgeon 1, 1-25-23, testing 2602 ft; Widgeon 2, 12-25-23, rig.

LOST HILLS—Standard United 1, 2-26-20, fsh 3388 ft.

SEMITROPIC—Standard's Goldman 1, 5-27-23, rur; Towle Est. 1, 7-27-23, lcn.

SOUTH DOME—Continental's Gatchell 28-7, 7-25-20, wocs, td 5380 ft.

TEMBLOR HILLS—Robert Foster's No. 1, 2-32-22, dr shale 2600 ft.

WEEDPATCH — Associated's DiGiorgio 1, 3-31-29, abn. 5501 ft.

WHEELER RIDGE—Badger Oil Co's El Tejon 1, 31-11-19, abn. 6229 ft. Reserve O & G Co's Tejon Ranch 1, 2-10-19, td 3708 ft, plug 2520 ft, Redr to 2610 ft; Tejon Ranch 2, 12-10-19, dr 2185 ft.

KINGS COUNTY

ALPAUGH—Trico O & G Co's Magee & Stone 1, 36-24-22, dr sandy shale 4825 ft.

PYRAMID HILLS—General's Martin 1, 20-24-18, dr shale 1827 ft.

MISCELLANEOUS

FRESNO COUNTY—Milham Exp Co's Oro Loma 1, 12-12-11, coring water sand 3420 ft. Russ Oil Synd.'s No. 1, 28-12-11, rep equip 5115 ft. Taft Well Dr. Co's Kreyenhagen 1, 33-22-16, grading.

HUMBOLT COUNTY—Texas Co.'s Eureka 1, 1-3-2, dr sand and shale 5767 ft.

SACRAMENTO COUNTY—Great American Pet. Co's Howard 1, 25-2-8, testing cement 8⅝ in 2952 ft on bottom.

SAN JOAQUIN COUNTY—Amerada's F. D. L. 1 , 15-2-5, coring shale 4040 ft.

TEHAMA COUNTY—Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, td 3996 ft, testing sg.

TULARE COUNTY—Kabella Oil Co's No. 1, 12-23-28, dr 805 ft. Kings River Oil Co's No. 1, 29-16-23, dr sand 2105 ft.

MONTEREY COUNTY—Shell's Branch 1, 34-24-10, sand and shale 712 ft.

SANTA BARBARA COUNTY

GOLETA—West Elwood Oil Co's Simonds-Campbell 1, 9-4-28, td 3700 ft, wocs 6⅝ in 3600 ft.

LOMPOC—M. J. Freeman's La Brea 1, 11-7-33, dr sandy shale 325 ft. Lompoc Pet. Co's Beauterbough 2, 18-7-34, dr hard sand 3320 ft.

NAPLES—Scully & Snyder's No. 1, 7-4-29, co 6220 ft.

SANTA BARBARA—M & L Oil Co's Domerick 1, 29-4-27, rur.

SAN LUIS OBISPO COUNTY

CHOLAME—Willett Oil Assn's Jack 2, 10-25-15, must recement, wet, td 3560 ft.

VENTURA COUNTY

BARDSDALE—El Rancho Oil Co's Elkins 1, 9-3-19, dr sand and shale 812 ft. Union's Dryden 1, 12-3-20, dr sand and shale 710 ft.

CONEJO — International Oil Developers' Powell 1, 33-2-20, td 3060 ft, recement 8⅝ in.

HOPPER CANYON—Oil Ridge Oil Co's Moran 3, 1-4-19, dr sandy shale 1557 ft.

LAS POSAS—Las Posas Pet Co's Mehan 1, 22-3-20, fsh 8120 ft.

OJAI — Continental's Pirie 1, 12-4-23, to plug to 1550 ft, td 2241 ft.

PIRU—Bachman Pet Co's 14, dr hard shale 4650 ft.

SANTA PAULA—High Mesa Oil Co's Butcher 1, 16-4-22, sd 100 ft. Edw. M. Lesperance's Boosey 1, 31-4-20, sd 1150 ft. J. W. Mosher's No. 1, 22-4-21, sd 2300 ft.

SANTA SUSANA—American Dr. Co's No. 1-A, 31-3-17, sd 550 ft.

SESPE—Supreme Oil Co's No. 1, 1-4-20, sd 145 ft.

SHIELLS CANYON—Texas Co's Shiells 128, 4-3-19, dr, sandy shale 63 94 ft.

SIMI—Dawson Oil Co's No. 1, 8-2-17, fsh 1910 ft. Paloma Oil Co's Marr 1, 12-2-18, dr 996 ft.

SOUTH MOUNTAIN—Calco Pet Corp's No. 2, 17-3-20, rur.

SOUTHERN CALIFORNIA

ARTESIA—Vanco Dev. Co's Millard 1, 25-3-12, dr tough shale 2820 ft.

BANDINI—Western Gulf's Vail 1, 16-2-12, rur.

BREA CANYON—Pressel-Perry-Tull's Baird 1, 30-2-9, sd 4176 ft.

EL SEGUNDO—Republic Pet Co's No. 1, 18-3-14, sd 5004 ft.

FAIRVIEW—Explorers Dr. Co's Norris 1, 9-6-10, sd 960 ft.

HUNTINGTON BEACH on tidelands—Black Eagle Oil Co's No. 1-B, permit 194, 32-5-11, td 4702 ft, plug 4696 ft, pumping 90% water.

MANHATTAN BEACH—Bethlehem Explor Co's Martin 1, 30-3-14, dr shale and sand 6900 ft.

NEWPORT—Si Ruben's No. 1, 14-6-10, sd 2574 ft. Wilshire Oil Co's Newport 1, 29-6-10, dr brown shale 305 ft.

PICO—Frontier Oil Co's No. 1, 12-2-12, dr sand and shale 3300 ft.

PUENTE—N. O. Shively's Rowland 1, 23-2-10, sd 3145 ft.

SAUGUS — International Oil Developers' Powell 1, 34-5-16, td 4339 ft, plug 2250 ft, to test.

TOPANGO CANYON—Monarch Pet Co's Sylvia Park 1, 5-1-16, rig.

SAN BERNARDINO COUNTY — Great American Pet. Co.'s Gapco D-1, 18-2-8, dr hard gray sand 455 ft.

WYOMING

ALBANY COUNTY—California Co's Holst 1, ne se se 13-17n-77w, running rods and tubing preparatory to pump 3222-27 ft in Dakota sand, where well swabbed 20 bbls. per hour.

BIG HORN COUNTY—California Explor. Co's Gafner 1, sw sw 4-54n-94w, Spence Dome, pb to 930-1040 ft and will shoot, where well had estimated 20-bbl daily showing, td 1500 ft.

CARBON COUNTY—Earl W. Reader Inc's Whitford 1, sw se ne 24-20n-84w, dr 3900 ft. Ohio and California Co's Kyle 1, ne se ne 26-21n-79w, c 5230 ft.

CONVERSE COUNTY — Chadron-Osage Oil Co's State 1, cne ne 16-32n-69w, dr 485 ft.

FREEMONT COUNTY—Mid-American Oil Co's Government 2, cne sw 14-28n-92w, rigging to pump after treating with 1000 gals of acid at 2175-2262 ft in Embar lime, where well pumped 110 bbls initial. Monongahela Oil Co's and S. H. Keoughan's Wisda 1, ne se se 13-28n-93w, resuming 2970 ft.

MONTANA

FERGUS COUNTY—Northern States Oil Co's Woodward 1, se se 20-14n-24e, dr 3100 ft. S. W. Pennock's Nordheim 1, nw se se 6-21n-18e, dr 600 ft.

CASCADE COUNTY—C. L. Smith's Fee 1, ne ne sw 14-22n-2e, Benton Lake, resuming 150 ft.

PHILLIPS COUNTY—Guy Norman's Pewitt 1, ne nw ne 20-24n-24e, dr 525 ft. Grant Smith et al's Phillips 4, nw sw 2-24n-23e, dr 210 ft.

COLORADO

BOULDER COUNTY—Leslie R. Steele et al's Maxwell 1, sw ne nw 24-1n-71w, dr 430 ft.

MONTEZUMA COUNTY — Coon & Teague's (McElmo Oil Co.) West 1, ne nw nw 31-36-17, sd 3130 ft.

PARK COUNTY—South Park Oil Co's State 1, se se sw 16-11s-17w, Hartsel anticline ur 10-in csg, td 1415 ft.

PROWERS COUNTY—Trojan O & G Co.'s Lotus 1, nw ne ne 15-23s-46w, Lamar district, fsh at 5224 ft.

PUEBLO COUNTY —Hooker-Hartman-Hill Oil Co's Hartman 1, nw se nw 31-22s-61w, sd 400 ft.

NEW MEXICO

EDDY COUNTY—Coronado Oil Co's Anderson 1, cne nw 13-20s-23e, sd 1462 ft. Getty Oil Co's Dooley 7, sw nw 24-20s-29e, dr 3742 ft. Stoval & Marshall's Rose 2, cne sw 28-24s-27e, dr 1435 ft, anhydrite and lime. Dooley et al's Commerce Trust 1, nw sw 8-20s-27e, dr shale 385 ft. Geo. F. Getty Oil Co.'s Andrew Dooley 7, swc nw 24-20s-29e, 6000-ft test, elev 3309 ft, dr 3745 ft.

LEA COUNTY — Amerada Pet. Corp.'s State 1-F, c sw sw 36-19s-36e, Monument area, elev 3594 ft, top anhydrite 975 ft, salt 1220-2275 ft, dr brown lime 3466 ft. Anderson-Prichard Oil Corp.'s Brett-Conoco 1, c se nw 7-20s-35e, Monument area, lcn; Fisher 1, c se ne 8-20s-35e, elev 3690 ft, dr 1690 ft. Amon G. Carter et al's G. H. Mattix-Conoco 1, c se nw 3-24s-37e, elev 3258 ft, top anhydrite 1090 ft, top salt 1225 ft, dr 1470 ft. R. H. Henderson et al's P. J. Langley 1, c se se 8-25s-37e, elev 3162 ft, top salt 1205 ft, making gas, lost 2 strings tools, td 2875 ft, set whipstock 2506 ft. Humble O&R Co.'s J. L. Coates 1, c nw ne 10-24s-36e, elev 3383 ft, salt 1314-2947 ft, top lime 2995 ft, recovered drill pipe, trying to kill gas flow, td 3370 ft; J. L. Cotes 1-A, relief well, elev 3385 ft, top anhydrite 1324 ft, top salt 1433 ft, pumping 7000 bbls water daily

into lime at 3394 ft to kill gas in offset. Jeffers Oil Co. (R. H. Henderson's) C. M. Carlson-Conoco 1, c nw se 27-25s-37e, lcn; A. N. Etz-Conoco 1, c ne sw 12-21s-32e, sd 154 ft; Jiminez-Conoco 1, c sw se 12-20s-33e, sd for larger machine, td 181 ft. Maljamar O&G Corp.'s P. Miller 1, c nw sw 23-17s-32e, elev 3992 ft, top anhydrite 790 ft, top salt 955 ft, dr 3510 ft. Nat'l Securities Oil Corp.'s V. Linam 1, nec s½ sw 33-18s-37e, elev 3712 ft, top anhydrite 1580 ft, logged salt 1716-2650 ft, top lime 2956 ft, pb from sulphur water at 4506 to 4230 ft, sd for acid. Ohio Oil Co.'s State-McDonald 3, c nw se 16-22s-36e, elev 3562 ft, dr 300 ft. Repollo Oil Co.'s B. W. Arnold 1, swc nw se 6-20s-32e, elev 3567 ft, top anhydrite 1540 ft, logged salt 1637-2695 ft, sr 4351 ft. Rowan Drilling Co. & Neville G. Penrose's E. M. Elliott-Conoco 1, c ne sw 17-22s-37e, elev 3400 ft, top anhydrite 1070 ft, dr 3015 ft. Shell's State-Endura 1, c se ne 12-21s-35e, elev 3588 ft, top lime 3020 ft, pb from hfw 4404 to 3926 ft, s&f 67 bbls oil and 82 bbls w after shot. The Texas Co.'s Saunders 1, c se sw 18-19s-37e, Monument area, lcn. The Texas Co.-Amerada & Columbian Carbon Co.'s M. L. Parker 1, c nw nw 29-26s-37e, elev 2952 ft, top brown lime 2807 ft, top white lime 3012 ft, lime pay 3243-48 ft, completed flowing 11 bbls fluid 60 percent sulphur water, per hr. W. L. Todd & The Texas Co.'s Fred Cole 1, c ne ne 35-19s-33e, elev 3603 ft, top salt 1540 ft, top white lime 3250 ft, sulphur water 3393-3400 ft, sd to abd 3518 ft. Sam K. Vierson & Brown's W. D. Robinson 1, c nw se 14-11s-32e, elev 4355 ft, rig.

OTERO COUNTY—Flynn, Welch & Yates Donohue 1, cnw ne 28-24s-15e, Sacramento Creek structure, woc 412 ft.

ROOSEVELT COUNTY — Claudell Dev. Co's Wilmes 1, se se 21-2s-30e, sd 3655 ft.

SAN JUAN COUNTY—Continental's Rattlesnake 43, nw se nw 12-39n-19w, td 940 ft and straightreaming to lower 5-in csg to top of sand.

TORRENCE COUNTY—49 Petroleum Co's Greenfield 1, cnw sw 17-9n-8e, lcn.

VALENCIA COUNTY—Pres-sel Dev. Co's No. 1 Morris ne se 30-12n-10w, dr 600 ft.

WEST TEXAS

ANDREWS COUNTY — Fuhrman Pet. Corp.'s W. T. Ford 2, se¼ sec 16, blk A-43, PSL sur, dr 1695 ft. Honolulu Oil Corp.-Llano Oil Co.'s J. E. Parker 1-B, nec w½ ne¼ sec 11, blk A-43, PSL sur, dr 1510 ft. Humble's J. S. Means 3, c nw ne sec 9, blk A-35, top salt 2134 ft, completed on gas lift 62 bbls oil in 2 hrs after acid treatment in lime 4475-4525 ft; R. M. Means 4, sw¼ sec 4, blk C-45, PSL sur, dr 3485 ft. Republic Prod. Co.'s W. H. Boner 1, sec 25, blk A-43, PSL sur, lcn. Lou Stogner et al's C. C. George-TP Coal & Oil Co. 1, se¼ sec 25, blk A-22, PSL sur, lcn. J. W. Tripplehorn et al's C. E. Ogden-Humble 1, sec sw¼ sec 6, blk A-46, PSL sur, lcn. E. M. Wahlenmaier Pet. Corp.-York & Harper's O. G. Bitler-J. F. Getty 1, c ne¼ sec 10, blk A-32, PSL sur, fsh 1225 ft. E. M. Wahlenmaier Pet. Corp.'s R. A. Cox-Humble 1, c nw¼ sec 8, blk A-33, PSL sur, lcn.

BREWSTER COUNTY—Floyd C. Dodson et al's Texas American Synd. 1, c ne ne sec 66, blk 10, H&GN Ry. sur, deep test, sd 950 ft. C. M. "Dad" Joiner et al's W. J. McIntyre 1, se¼ sec 31, blk 352, W. J. Mitchell sur, sd 2150 ft. K. H. King & C. R. Franklin's A. S. Gage 1, nw¼ sec 138, blk B-22, GH&SA sur, sd 777 ft. S. G. Smith et al's Mrs. Ed. Decie 1, nwc se¼ sec 7, blk 1, G. T. Ry. sur, co 805 ft. G. H. Storey et al's Jim P. Wilson 1, c se nw sec 3, blk 212, T&St. L. Ry. sur, dr 365 ft.

COKE COUNTY—C. D. Hagerty et al's S. W. Gaston 1, Jos. Young sur No. 11, elev. 2022 ft, sd repairs 2855 ft.

CRANE COUNTY—American-Liberty Oil Co. et al's J. B. Tubb-Humble 1, swc sec 11, blk B-27, PSL sur, dr 1350 ft. Gulf's W. N. Waddell et al 1, c nw nw sec 4, blk B-27, PSL sur, Ordovician test, elev 2554 ft, top salt 510 ft, sd to install rotary, td 4595 ft; Henderson 1, c se¼ sec 3, blk B-23, PSL sur, dr 60 ft; M. B. McKnight 1, c sw sw sec 9, blk B-21, PSL sur, top salt 615 ft, dr 1575 ft. Magnolia's W. P. Edwards 1, se¼ sec 2, blk B-23, PSL sur, rig.

CROCKETT COUNTY — E. C. Leslie & Hiller's J. S. Todd 1, sec ne ne sec 26, blk WX, GC&SF sur, sd 580 ft.

CULBERSON COUNTY — Anderson-Prichard Prod. Corp.'s H. A. Borders 1, nw¼ sec 34, blk 249, GB&CNG Ry. sur, elev 4565 ft, sd 1125 ft. Miller et al's fee 1, sec 21, blk 97, PSL sur, sd 2137 ft. Nelwood Drlg. Co.'s A. L. Hall 1, sec se¼ sec 11, blk 54½, PSL sur, sd 200 ft.

JEFF DAVIS COUNTY—C. M. "Dad" Joiner et al's Jones-Coffield 1, ne¼ sec 8, blk 3, H&TC Ry. sur, dr 1105 ft.

ECTOR COUNTY — Empire Gas & Fuel Co.'s H. E. Cummins 1, sec se¼ sec 10, blk 44, T&P Ry. sur, T-1-N, elev 3234 ft, top anhydrite 1397 ft, top salt 1420 ft, dr 3085 ft. Gulf's C. A. Goldsmith 1, c nw sec 10, blk 44, T&P Ry. sur, T-1-S, elev 3112 ft, top anhydrite 1482 ft, top salt 1518 ft, top Yates sand 2765 ft, top lime 3750 ft, or 3716 ft, dr 3975 ft. International Pet. Corp.'s O. C. Harper's E. F. Cowden 1, c se se sec 25, blk 44, T&P Ry. sur, T-2-S, elev 3019 ft, top anhydrite 1605 ft, top salt 1645 ft, top lime pay 4147 ft, dr with 3000 ft oih 4260 ft. Landreth Prod. Corp. et al's Cowden Hrs. 1, swc sw¼ sec 18, blk 44, T&P Ry. sur, T-1-N, elev 3192 ft, top salt 1445 ft, top Yates sand 2648 ft, dr 3890 ft; Clarence Scharbauer 1-A, sec nw¼ sec 13, blk "A", PSL sur, dr 870 ft. Neville G. Penrose et al's TP Land Trust 1, nwc w½ se¼ sec 31, blk 45, T&P Ry. sur, T-1-S, elev 3154 ft, top anhydrite 1290 ft, top salt 1375 ft, top lime 3895 ft, top sulphur w 4298 ft, dr 4400 ft.

EL PASO COUNTY—Tri-State Oil Co.'s Chas. & L. M. Kinkel 1, nec sec 237, S. F. No. 7232, sd 225 ft.

FISHER COUNTY—Tide Water & Merry Bros. & Perini, Inc.'s W. E. Hittson 1, ne¼ sec 177, blk 2, H&TC Ry. sur, sp. E. M. Campbell et al's D. F. Maberry 1, Maberry Sur No. 48, mim.

GARZA COUNTY—M. L. Richards et al's J. R. Sullivan 1, nwc sec 3, S. E. Harper sur, A-1118, top salt 920 ft, top lime 2325 ft, dry and abd 2346 ft.

GLASSCOCK COUNTY—John I. Moore-Loffland Bros. et al's L. S. McDowell 1, c se ne sec 22, blk 34, T&P Ry. sur, T-2-S, elev 2534 ft, top lime 2137 ft, top Crinoidal lime 9471 ft, co to dd from 9946 ft.

HAMILTON COUNTY — Ireland O&G Co.'s Geo. L. Doyle 1, Isaac Adams sur, elev 1055 ft, top Caddo lime 3050 ft, so&g, dr 3300 ft.

TOM GREEN COUNTY—J. F. Jacobs et al's H. G. DeLong 1-A, Geo. Smith sur No. 1825, sp. Eugene Mays and Amber Pet. Co.'s Ike Funk 1, near c nw sw sec 38, blk 5, H&TC sur, lcn.

HOWARD COUNTY—John I. Moore & H. G. White's D. H. Snyder 1, swc sec 28, blk 30, T-1-S, machine.

JONES COUNTY—Coltex Oil Co.'s H. N. Smith 1, se¼ sec 25, blk 19, T&P Ry. sur, dry and abd 2609 ft. Fondren Production Co.'s Sam R. Cox 1, sec 74, blk 14, T&P Ry. sur, elev 1656 ft, dry and abd 2402 ft. Dr. C. E. Johnson et al's W. T. Young 1, blk 190, B. Trevino sur, fsh 2003 ft. Putman Oil Co.'s J. J. Steele 1, lot 8, C. Allen sur No. 10, A-500, jkd 1207 ft, skid rig dr 730 ft. Shappell Oil Co.'s J. J. Steele 1, ne¼ sec 10, blk 15, T&P Ry. sur, elev 1734½ ft, show oil in sandy-shale 2141-45 ft, fsh.

LOVING COUNTY—Mason Oil Co.'s M. Kyle 1, c nw se sec 22, blk 55, T&P Ry. sur, Tsp. 1, dr 935 ft. Porter Rankin et al (was D. C. Evans') W. D. Johnson 1, nw¼ sec 12, blk 57, Tsp. 1, T&P Ry. sur, co 2030 ft.

LYNN COUNTY—Edgar T. Hart & Wanete Oil Co.'s C. O. Edwards 1, se¼ sec 29, blk 1, L. & S. V. Ry. sur, elev 3112 ft, top dolomite lime 4140 ft, reaming 4619 ft.

MARTIN COUNTY—S. E. Wright & Ralph Scott's F. W. Flanagan 1, nec sec 22, blk 37, T&P Ry. sur, T-1-S, sp and sd.

PECOS COUNTY—Gulf's White-Baker 5, nec ne¼ sec 88, blk 194, GC&SF Ry. sur, elev 2981 ft, top lime 1938 ft, show o&g 1985-88 ft, bailing oil and sulphur w 2051 ft. John

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Roseborough et al's Sidlow 1, ne¼ sec 19, blk 3, H&TC Ry. sur, lcn abd. Trans-Texas Oil Co.'s C. M. Caldwell 1, sec Sec 27, blk 50, T&P Ry. sur, Tsp. 9, co 1856 ft.

REAGAN COUNTY—Byrd-Frost, Inc.'s O. F. Boyd 1, c se sec 6, blk "E", L&SV Ry. sur, top salt 1238 ft, sd 2522 ft. Dobbs Oil Co.'s W. E. Friend 1 (681-ac), nwc s½ sec 3, Wm. Allen sur, top salt 1060 ft, dr 2255 ft. John W. Emch & Plymouth Oil Co.'s Mrs. E. V. Belcher 1, se¼ sec 4, blk 4½, GC&SF Ry. sur, 8 mi nw Big Lake field, sp and sd. Skelly Oil Co. et al's University-Utah 1-D, c sw nw sec 33, blk 8, Ordovician lime test, elev 2891 ft, top Cisco 9174 ft, top Simpson 9400 ft, tested salt w at 9967 ft, pb to 3100 ft for shot.

REEVES COUNTY—J. E. Cunningham & A. R. Eppenauer Drlg. Co.'s Tiller Bros. 1, R. P. Altman & C. C. Wyatt sur, elev 2908 ft, top Deleware lime 3795 ft, top sand 3810 ft, show gas in black lime 4014-20 ft, sd 4091 ft. Kenneth Slack & L. M. White's Francis Reeves 1, c se nw sec 20, blk 56, PSL sur, lcn. Herbert Oil Co. et al's E. M. Williams 1, sec 17, blk 6, H&GN Ry. sur, dr 410 ft.

SCHLEICHER COUNTY—J. M. Cooper et al's Bert Page 1, near c nw¼ sec 40, blk "L", GH&SA sur, Ordovician lime test, elev 2270 ft, tested dry 6035 ft, co to dd. J. D. Wesner, W. C. Proctor et al's Judkins-Spencer (Pure) 1, c sw¼ sec 4, Hooper & Wade sur, blk "A", dr by bit, td 212 ft.

SCURRY COUNTY—E. L. Goos et al's J. E. Murphy 1, machine. C. T. McLaughlin et al's W. C. Allen 1, c ne¼ sec 398, blk 97, H&TC Ry. sur, top salt 772 ft, sd 1795 ft.

STONEWALL COUNTY—Merry Bros. & Perini, Inc. & Humble's C. L. Williams 1, sec 6, blk "C", AB&C sur, ur 5 3/16-in cas 3304 ft. Barnsdall Oil Co.'s J. Young 1, nec blk 26, Austin-Williams sur No. 348, rog.

SUTTON COUNTY—Paul C. Teas et al's C. E. Mower 1, c ne sw sec 39, blk 5, TW&NG Ry. sur, elev 2349 ft, Ordovician lime test, top lime 3268 ft, top Ellenberger lime 4520 ft, sd 4757 ft; G. S. Allison 1, sw¼ sec 49, blk "A," GWT&P Ry. sur, lcn.

TAYLOR COUNTY—H. Crissman et al's Abilene fee 1, near c se¼ sec 66, BAL sur, sd 1750 ft. Eastland Oil Co. & Geo. C. Meredith's C. R. Tittle 1, c nw nw sec 37, blk 19, T&P Ry. sur, lcn.

UPTON COUNTY—Baldridge Oil Co.'s S. Peck 1, sec se¼ sec 29, blk 41, T&P Ry. sur, T-4-S, salt 1785-2720 ft, top Yates sand 2865 ft, ur 3200 ft. Gulf's J. T. McElroy 103, c nw sw sec 197, blk "F", elev 2625 ft, top lime 2620 ft, top Ordovician 11,347 ft, dr 12,535 ft. Humble's L. W. Pollok-Gulf 1, c nw sec 4, blk "M", EL&RR sur, Ordovician lime test, top salt 1670 ft, top Yates sand 2560 ft, fsh 4943 ft.

WARD COUNTY—Magnolia's Geo. Sealy 1-43, nwc sw¼ sec 43, blk "F", top anhydrite 1036 ft, fsh 1850 ft. Rector Oil Co. et al's Lee Monroe 2, e cor sec 2, blk 1, W&NW Ry. sur, top salt 2490 ft, dr 4110 ft.

WINKLER COUNTY—Emperor Oil Co.'s S. M. Halley 1, sec n½ se¼ sec 12, blk B-12, PSL sur, machine. Frank M. Greene et al's J. T. Cross 1, nec nw¼ sec 4, blk B-10, PSL sur, lcn. Joe C. Maxwell-Atlantic O. P. Co.'s Brown-Altman 1 (60-ac), nec w¼ nw¼ sec 6, blk B-5, machine. Sid Richardson et al's J. B. Walton-Pure 1, sw¼ sec 1, blk B-3, PSL sur, elev 2940 ft, top anhydrite 1131 ft, top lime 2115 ft, making gas, dr 2800 ft. Siosi Oil Co.'s J. C. Lovett 1, nec sec 36, blk B-26, PSL sur, 8,000,000 ft gas at 2588-91 ft, fsh tools. Skelly Oil Co.'s J. M. Halley 2, ne¼ sec 25, blk B-11, PSL sur, elev 2726 ft, jkd gasser, sd 3090 ft. Sun Oil Co.'s S. M. Halley 1, sec n½ sec 24, blk B-12, PSL sur, elev 2736 ft, top lime 2485 ft, making 30,000,000 ft gas with spray oil, dr 2695 ft. TP Coal & Oil Co.'s Lum Daugherty 1, sec n½ se¼ sec 2, blk B-26, PSL sur, dr 2690 ft. Roy A. Bestbrook et al's L. Daugherty 1, nec w½ se¼ sec 11, blk B-26, mim; T. G. Hendrick 1, nec nw¼ sec 14, blk B-26, PSL sur, mim.

YOAKUM COUNTY—Honolulu Oil Corp. & C. J. "Red" Davidson's L. P. Bennett 1, c ne ne sec 678, blk "D", John H. Gibson sur, sp and sd.

EAST TEXAS

ANDERSON COUNTY—Gulf Prod. Co.'s W. B. Robinson 2 (100-ac), David Stilts sur, Camp Hill area, dr 2200 ft. Gulf and Humble's O. G. Rogers 1 (267½-ac), Daniel Parker sur, 5 mi sw of Elkhart, elev 301 ft, Pecan chalk 4095-4280 ft, Austin chalk 5047-5280 ft, top Woodbine section 5486 ft and sand 5519-23 ft, tested sw, top Red Beds 5669 ft, dr 5700 ft. Hunt Prod. Co.-Sun Oil Co.'s Mrs. Alice Scott-Pure 1 (300-ac), Jas. Crawford sur, Slocum area, dr 4010 ft. R. B. Sanders et al's S. G. Moore 1 (28.83-ac), J. C. Rosson sur, Camp Hill area, mim. Tide Water and Texas Seaboard Oil Co.'s N. N. Wills 21-A, Cayuga field Trinity test, elev 308 ft, dr 7560 ft; John Smith 1 (49.1-ac), John Adams sur, Long Lake field gas unit, elev 294 ft, Pecan chalk 3458-3709 ft, Austin chalk 4711-4946 ft, top Sub-Clarksville sand 4957 ft, so&g on dst 4982-5020 ft, dr 5115 ft; C. T. Valentine 1 (301-ac), John Little sur, 9 mi n of Palestine, rig.

BOWIE COUNTY—Tex-Ark Oil Co.'s J. B. Hamilton 1 (40-ac), Jessie Milam sur, elev 272 ft, sd 250 ft.

CAMP COUNTY—E. J. Moran, G. E. & Ray Hubbard's W. M. Mitcham 1 (100-ac), L. Rose sur, 1½ mi n of Newsome, lcn.

CASS COUNTY—Penguin O&G Co.'s A. M. Tyne 1 (570-ac), David Frazier sur, 3 mi w of Avinger, dr 2850 ft.

CHEROKEE COUNTY—Jacksonville O&G Corp.'s H. D. Henderson 1 (40-ac), J. Pineda sur, elev 409 ft, sd 693 ft. Killough et al's J. S. Strickland 1 (40-ac), Urian Moore sur, 7 mi nw of Jacksonville, elev 433 ft, sd 3505 ft. Florence Oil Co.-H. A. Baker's T. Smith 1 (40-ac), Jose Pineda sur, 5 mi nw Jacksonville, dk. Ponta Oil Co. et al's C. W. Darley 1 (35-ac), (east) Cyrus Parks sur, 2¼ mi s of Summerfield, elev 434 ft, Pecan chalk 3584-3995 ft, dr 4075 ft. T. J. Wood & Young's New Birmingham 3 (160-ac), Levi Jordan sur, Rusk pool, fsh 2495 ft.

ELLIS COUNTY—Murphree & Lon Coker's Lon Coke 1 (30-ac), R. de la Pena sur, Austin chalk 622-1010 ft, dr 1325 ft.

GREGG COUNTY—O. T. Clark et al's T. G. Williams 1 (100-ac), David Hill sur, 3 mi ne of Longview, elev 426 ft, Pecan chalk 2391-2985 ft. top Austin chalk 3447 ft set 5 3/16-in cas 3553 ft.

HENDERSON COUNTY—Great State Oil Corp.'s R. Sid Ansley 1-A, N. B. Thompson sur, elev 268 ft, Austin chalk 2532-2826 ft, sd 3305 ft. O. M. Rector et al's C. L. Loper 1 (3½-ac), I. Clendennen sur, Cayuga field, lcn. Fred Upchurch et al's C. L. Loper 1 (3½-ac), I. Clendennen sur, Cayuga field, lcn. Taubert & McKee's M. T. Dodd 1 (160-ac), Geo. Aldrich sur, 4 mi e Malakoff, elev 376 ft, Pecan chalk 2390-2504 ft, Austin chalk 3456-3610 ft, sd 4049 ft. H. M. Wilson et al's fee 1 (943-ac), Thomas Caro sur, 5 mi n Malakoff, dk. Toddie L. Wynn and LaRue Bros.' G. W. Forester 1 (114-ac), David Cherry sur, elev 432 ft, Pecan chalk 2580-2784 ft, Austin chalk 3630-4046 ft, top Sub-Clarksville sand 4047 ft, top Woodbine series 4290 ft, sw sand, dry and abn 4367 ft.

HOPKINS COUNTY—D. A. Hale et al's L. N. Hall 1 (70-ac), A. Caro sur A-143, elev 506 ft, Pecan chalk 1825-2040 ft, top Austin chalk 2728 ft, sd 2950 ft.

HUNT COUNTY—D. T. Cauble et al's Y. B. Reed 1 (220-ac), F. Thweatt & C. B. Payne sur, 3 mi se Greenville, top Woodbine 2809 ft, top Red Beds 2874 ft, sd for dst at 3435 ft. J. F. Morrissey Co., Inc.'s B. F. Fry 1 (146-ac), Caloway Davis sur, 7 mi se Ladonia, rig. H. G. Samson and Shawver et al's J. R. Phillips 1 (53 1/3-ac), W. L. James sur, elev 522 ft, top Gober chalk 550 ft, top Austin chalk 1113 ft, sd 2065 ft.

KAUFMAN COUNTY—G. H. Germany et al's D. Clark-W. S. Kirby 1, S. Edens sur, co 1780 ft. L. P. Kean et al's J. B. Hunter 1, R. Sowell sur, 4 mi s Terrell, elev 453 ft, top Austin chalk 1785 ft, tested sw on dst at 3400 ft.

LEON COUNTY—Killough & Tucker's J. W. Lee 1, Jacob Burleson sur, Buffalo area, lcn.

LIMESTONE COUNTY — J. W. Kemp Co.'s Vol de Long 1 (220-ac), Pedro Varella sur, 2½ mi n Thelma, rig. Dan H. Daugherty et al's Sallie Welch 1 (94-ac), Pedro Varella sur, Austin chalk 2350-2650 ft, top Woodbine 2890 ft, claim so 2940-51 ft, coring 2986 ft. J. Edward Mills et al's J. B. Hunt 1 (34¼-ac), Israel Woods sur, 3 mi ne Kosse, Pecan chalk 2010-2137 ft, Austin chalk 2780-3158 ft, top Woodbine sand 3578 ft, fsh 3636 ft.

MORRIS COUNTY—Marydun O&G Co.-Sterling O&R Co.'s T. C. Conner 1 (1000-ac), M. W. Mathews sur, elev 294 ft, Pecan chalk 2345-2890 ft, Blossom sand 3398-3451 ft, top Woodbine series 3960 ft, top Red Beds 4092 ft, dry and abd in sw sand 4118-4206 ft. Steve J. Rotondi et al's W. & C. Smith 1 (50-ac), M. C. Vela sur, 2½ mi sw Naples, rig. B. L. Watson et al (was HNH Drlg. Co.'s) E. Hall 1 (177-ac), Levi Jordan sur, top Pecan chalk 2360 ft, sd 4002 ft.

NAVARRO COUNTY—L. N. McCulloch et al's Berry Bros. 1 (35-ac), W. W. Moss sur, Austin chalk 751-1060 ft, sd 1182 ft. Wiggins et al's D. A. Donoho 1 (63½-ac), John Cauple sur, 2 mi sw Corsicana, elev 467 ft, sd 1439 ft.

RED RIVER COUNTY—J. E. Dinger et al's W. T. Norris 1 (351-ac), Joseph Guest sur, 1 mi s Detroit, elev 464 ft, Red Beds 1290-1413 ft, sd 1860 ft. C. M. "Dad" Joiner et al's D. Rust 1, C. C. Wilborn sur, s edge Avery, dk.

ROBERTSON COUNTY—H. L. Patton Co.'s W. H. & H. A. Ely 1 (616-ac), Antonio Manchaco sur, 5 mi se Hearne, elev 392 ft, top Carrizo 661 ft, dr 1825 ft.

RUSK COUNTY — Ben E. Lamb et al's Haywood Leath 1 (185-ac), L. J. Dooley sur, 2½ mi ne Pirtle, elev 370 ft, Pecan chalk 2418-2793 ft, Austin chalk 3352-3512 ft, sd 4740 ft.

SMITH COUNTY—W. L. Cloud and A. G. Deck's Dora Kendall 1, John Williams sur, 3 mi e of Van field, sd 1650 ft. W. R. Harrison et al's W. P. Rushing 1, Jacob Herrin sur, 1½ mi se Whitehouse, elev 393 ft, pb from 4673 to 4330 ft, sdo.

TITUS COUNTY—Steve J. Rotondi et al's O. C. Lillianstern 1 (40-ac), W. H. Crawford sur, 5 mi se of Talco, elev 301 ft, dk.

UPSHUR COUNTY — John Hooser and Ben G. Barnett's O. J. Phillips 1 (100-ac), P. Whitestone & L. Henderson sur, Pecan chalk 2665-3065 ft, Austin chalk (top) 3495 ft, cem cas 3650 ft, td 3675 ft. Thos. D. Humphrey et al's Claude Nation 1 (156.28-ac), Robertson Asher sur, 1½ mi n of Ore City, rig.

VAN ZANDT COUNTY—J. C. Acree et al's F. W. Anderson 1 (160-ac), John Blair sur, 4 mi n Wills Point. Blackwell O&G Co. et al's Mrs. C. H. Browning 1 (100-ac), J. P. Tackett sur, 2½ mi se of Van, lcn. A. A. Geyer et al's J. E. Crim 1 (41.6-ac), Wm. Daniel sur, lcn. Monterey Oil Co. (Green & Winn's) S. E. Cox-A. L. Eaton 1 (67-ac), J. Wilson sur, 2 mi se Martin Mill, elev 518 ft, top Pecan chalk 2730 ft, top Austin chalk 3900 ft, sd 4675 ft. O'Byrne et al's J. D. Daniels 1 (115-ac), W. R. Flowers sur, 2¼ mi s Martin Mills, lcn. Newt Tidwell & W. J. Rogers' L. E. Breucher 1 (98¾-ac) David Clapp sur, 5 mi se Wills Point, elev 499 ft, sd repairs 3150 ft.

SOUTH TEXAS

BANDERA COUNTY—Peerless O&G Co.'s R. G. Garrison 1, sec 506, GC&SF sur, dr 3355 ft.

BASTROP COUNTY—Malone & Owens' S. S. Spooner 1, L. Leverenz sur, sd 1020 ft. Marts & Beavens' W. L. Miller 1, blk 22, Dennis Dykes sur, fsh 3080 ft. Nelson Puett's Carroll 4, A. Mayes sur, fsh 2165 ft.

BEE COUNTY—Dirks Bros.' Gorree 1, J. Taylor sur, coring 3925 ft, elev 431 ft, top Hockley 3084 ft, top sand 3907 ft, test sw; I. J. Miller 1, C. Rivas sur, to move on shortly. Falvey et al's S. D. Copeland 1, B. Q. Hadley sur, 2000 ft sw Worth well, sp. Felmont Corp.'s J. T. Earnest 1, Bee County School Land sur No. 17, coring 4756 ft, test mud, little show o&g 4729-39 ft. H. Hartzendorf's Fee 1, G. A. Kerr sur, sd 3648 ft. Humble O&R Co.'s Thompson 2, G. Roache sur, cutting out stuck ds 5405 ft. Paul Meaders et al's Keller 1, sec No. 28, Alcorte sur, sd 3700 ft for ds, will dd, plan to test Sparta. Worth Oil Co.'s Rutledge 1A, A. Hadley sur, td 3394 ft, blowing abt 5 bbls oil, 20,000,000 cu ft gas, ½ in ch, tp 1150, cp 1240 lbs, temp.

70 degrees, gravity 30.3 corrected, opens new field. Wrightsman Oil Co.'s A. J. Kimball 1, S. Winship sur, sd 1800 ft.

BEXAR COUNTY — American Gas Co.'s Oliver 5, M. F. Rodriguez sur, dr 2600 ft, glenrose. N. G. Carter's Bilhartz Bros. 1, F. Rolen sur No. 48, dr below 755 ft. M. A. Frederich's Fee 1, F. Recardo sur, td 1302 ft, 4 inch csg parted 1007 ft, fsh. Jones & Keiffer's E. W. LaGrange 1, Rolen sur No. 48, sd 1010 ft. C. J. Lecomte's Mayfield Park 1, sd 362 ft. McPhee & Briggs' Florence Lamb 1, Manuel de Luna sur No. 4, dr 1935 ft. Mid-Tex Pet. Co.'s Walker 1, lot 21, S. N. Dobie sur No. 79, dk. Carroll C. Raborn's A. B. Stephens 1, Peter N. Hays sur, td 410 ft, sd to change over to rotary; Claud McCauley 1, Wm. Harris sur, sd 168 ft to change over to rotary. Richcul Oil Co.'s McCullough 1, J. M. Baerrera sur, n Von Ormy, dr 250 ft.

CALDWELL COUNTY—Exploration Dev. Co.'s W. T. Mooney 1, S. Seal sur, dr 1450 ft. Ogden & Reed Oil Co.'s T. H. Compton 1, 150 ft nwl, 450 ft swl 100-ac tr, P. Martinez sur, 1 mi nw Lytton Spgs, dr 400 ft. R. Y. Walker's J. M. Pierce 1-B, sd 2556 ft; Walker Bros. 2, S. Seal sur, ru.

CALHOUN COUNTY — Continental Oil Co.'s Am. National Realty Co. 2, ne ne sec 6, blk C, P. Garcia sur, dr 4700 ft. Haliburton Oil Co.'s D. Burton 1, M. Sanchez sur, dr 4630 ft. The Texas Co.'s Blardone 1, S. Shupe sur, dr 5350 ft; R. Duelburg 1, M. Sanchez sur, coring 6190 ft; Martin 1, Florentina Garcia League, dr 4720 ft; W. H. Wehmeyer 1, M. Sanchez sur, td 6238 ft, prep to set csg. Tulane Gordon's Shofner 1, Port Lavaca town tracts, ½ mi n townsite, lcn.

DE WITT COUNTY—Stewart & Egan Oil Corp.'s R. Kleberg 1, J. J. Tumlin sur, set 80 ft 10 in csg, sd. Sunray Oil Co. et al's W. W. Buehrig 1, sec 7, T&NO–Ry. sur, sd 4105 ft, will likely temp. abnd at this depth, but later will dd to 6500 ft.

DUVAL COUNTY—Mills Bennett's Duval County Ranch 2, 1200 ft el, 990 ft sl sec 258, Colema district, sp. Bridwell Oil Co.'s Sutherland 2, sec 122, dr 2375 ft. Conway & Buescher's A. H. Hoffman 2, sec 116, sd 3050 ft, contract depth, to dd. Harvey & Henderson's Chernoskey 1, sec 226, td 2650 ft, pb and woc, will dr out to 2225 ft. Intrepid Oil Co.'s Parr 2, sec 115, dr 1500 ft. Magnolia Pet. Co.'s Bennett 1, sec 441, dr below 2500 ft. Mortimer et al's Peter's Ranch 2-B, sec 196, coring 2597 ft. D. H. O'Byrne's Ball 1, sec 3, Agua Poquita gr, ru. Santa Clara Oil Co.'s Wood-Welder 1, sec 385, sp and sd to dr water well. Smith & Hamil's M. C. Hubbard 1, 330 ft sl and wl sec 77, 1½ mi sw Loma Novio, sp and set sur csg. Tex-La. Oil Corp.'s M. C. Hubbard 1, sec 84, sand 2789-95 ft, dry, sand 2795-99 ft, oil, first dst failed, ream for another test.

FRIO COUNTY — Amerada Pet. Corp.'s Halff & Oppenheimer 4, 3200 ft nwl, 990 ft nel sec 15, A. H. Gibson sur, 1000 ft ne No. 3, dk; W. H. Smith 1, J. B. Mason sur, No. 322, ru. Shoemaker et al's M. Roach Est. 1, C. Wentzel sur No. 139, dr 3100 ft.

GONZALES COUNTY—Southwestern Dev. Synd.'s W. S. Atkinson 1, S. Y. Reims sur, td 5700 ft, move off rig, will deepen.

GUADALUPE COUNTY — Gode et al's Hicks 1, E. de los Santos Coy sur, to move in spudder. A. D. Locke's Mrs. N. S. Lowman 1, Cyrus Campbell sur, sd 1810 ft. Minerals Corp. of Texas' Allen Phillips 1, Cortines sur, ru. Port Isabel O&G Co.'s Emil Leissiner 1, Davis sur, dr 1660 ft, top Austin chalk 1571 ft. W. A. Scrutchin's A. H. Smith 1, J. B. Cowan sur, lcn. L. E. Trout's Myrtle McKee 1, Green DeWitt sur, sd 3090 ft.

HIDALGO COUNTY—D. M. C. Oil Co.'s (Downey & Morton) Daskam 1, blk 34, por 45, sd 4114 ft for csg. E. H. East, Tr.'s F. M. Carter 1, blk 19, Retama Sub, Del Tule gr, sd 1600 ft. C. O. Maddox et al's John H. Shary 1, lot 21, Shary sub, lcn. E. L. Smith Oil Co.'s Alejandro Flores de Flores 1, sh 250, por 39, 5800 ft n Samfordyce field, set 208 ft sur csg, wocs.

JACKSON COUNTY—Shell Pet. Corp.'s McCrory 1, sec 15, Morris & Cummings sur, coring 5803 ft.

JIM HOGG COUNTY—French Oil Co.'s Ed East 2, 330 ft nel and nwl of blk 74, sh 2, Moritas gr, ru. Miller et al's Yeager 1, blk 6, sur 20, fsh 3200 ft. Sun Oil Co.'s T. T. East 1, e blk 18, sh 5, Santa Domingo de Arriba gr, dr 2250 ft.

JIM WELLS COUNTY—A. M. Hagan et al's Robt. Adams 1, sur 10, prep to mim. O. W. Killam's W. D. Wade 5, blk D, S. A. Agua Dulce sur, dr 4165 ft. Joe Lundin's C. T. Hewitt 1, R. P. Haldeman sur, sec 51, dr 3575 ft. Magnolia Pet. Co.'s A. A. Seeligson 6, V. Canale sur No. 218, dr 4560 ft. Smith & Storey's Schaeffer 1, S. Bigham sur, sd 341 ft for water.

KARNES COUNTY—American Liberty Oil Co.'s Wolfmuller 1, 330 ft sel and swl 208-ac tr, J. Johnson sur, de 3100 ft. Luling O&G Co.'s W. W. Boyce 1, S. D. Sill sur, dr 900 ft. H. A. Pagenkopf's McAda 1, Carloa Martinez sur, dr 4375 ft.

KERR COUNTY—Jeff Love & Eastland Oil Co.'s Jeff Love 5-E, sec 1594, J. Martinez sur, cement caving hole 5390 ft, top Big Lime 5385 ft, elev 2338 ft, df.

LA SALLE COUNTY—S. Killingsworth's L. Yeager 1, lot 10, blk 5, sur 94, dr 975 ft.

LAVACA COUNTY—L. A. Douglas's Fehrenkamp 1, M. Mitchell sur, dr 2560 ft.

LIVE OAK COUNTY—Baugh & McMillan's Walton & Campbell 1, D. R. Fant sur, td 3214 ft, sd, well taken over by Orbit Drlg. Co. to dd. Henderson Coquat's L. A. Reagan 1, McGloin sur, sp and set sur csg; H. E. Rex 1, GH&H sur No. 1, dr 2900 ft. Houston Oil Co.'s Cartwright 32, M. Trudo sur, dr 3200 ft. Smith & Storey's Nueces Valley Townsite Co. 1, Jane Curry sur, dr below 617 ft sur csg. J. O. Whittington's Little 1, M. M. Shipp sur, td 5758 ft, pb and perf csg 4227-55 ft, showing considerable gas.

McMULLEN COUNTY — Henderson Coquat's Ezzell 1, D. R. Fant sur, dr 650 ft. Howeth & Swiger's Rhodes Ranch 1, M. F. Lowe sur, dr 3010 ft. Texio Oil Co.'s Atkinson 1, sec 13, Martha J. Dean sur, dr 300 ft.

MEDINA COUNTY—Dupree & West's J. A. Mott 1, J. Ball sur No. 1478, dr 75 ft. Lynd & Hepler's M. A. Jungman 1, N. B.

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Rogers sur, td 2019 ft, serp 1472-1709 ft, top chalk 1700 ft, pb sand 470-76 ft, test o&sw abnd. W. T. Shoemaker's Noonan 1, Ashbury sur No. 52, dr below 500 ft.

NUECES COUNTY — Southern Minerals Co.'s Rand Morgan 1, lot 29, Elliott sur, 2½ mi nw Saxet field, set sur csg.

REAL COUNTY—H. J .Hartwell et al's L. J. Haby 2, AB&M sur No. 175, dr 3056 ft.

REFUGIO COUNTY—Temple Hargrove et al's Weiss 1, ne nw sec 40, Bonnie View sub, ru. Humble O&R Co.'s Mrs. M. M. Marberry 1, J. Dunn sur, dr 3625 ft. Magnolia Pet. Co.'s attie Wood 1, S. Turner sur, dr 6400 ft.

SAN PATRICIO COUNTY — Heep Oil Corp.'s E. H. Welder 1-C, 466 ft nl and el sec 46, Welder sub, in R. Montgomery sur, sp; Welder 1-D, 466 ft sl and wl 600-ac tr in CJF & E Portilla sur, 5½ mi ne Sinton, mim. A. E. Masterson et al's W. A. Wurzbach 1, C. C. Hornsby sur, temp abnd 5521 ft, but will dd.

STARR COUNTY—Armstrong, Emanuel & Adams' Starr County Cattle Co. 1, blk 57, Jeffries Lambeth sub, por 89, cement liner to td, will perf opposite prod horizon, sand 2704-15 ft. C. R. Borah et al's A. Guerra 1, sh 6, San Jose gr, dr 3027 ft. John Clopton's D. J. Tijerina 1, blk 14, sh 14-C, por 80, sd 1750 ft. Conroe Drlg. Co.'s Guerra 1-A, J. N. Crawford sub, dr 1353 ft. H. L. Curry's Kelsey Bass 2, sh 8, por 77, dr 1184 ft. Hughston Oil Co.'s Wood-Gregg 1, por 84, sp. Lindberg & Davis' Kelsey Bass 6, sh 6, dr 300 ft, last rept. Hiriam Reed's Block Bros. 1, blk 4, tr 28-A, por 80, dr 1500 ft. Sun Oil Co. & Humble O&R Co.'s Mantor & Briggs 1, c nw nw sec 53, 15 mi n Rio Grande City, ru for 5000 ft test. Sunray Oil Co.'s Munoz 1, por 75, dr 3025 ft.

TRAVIS COUNTY—J. M. Hickey's A. Lind 1, M. Winburn sur, dr 420 ft.

VICTORIA COUNTY—Costa Oil Co.'s J. E. Schovajsa 1, lot 14, Rupley sur, set 800 ft sur csg, wocs. Gillispie & Superior's Brandt 1, lot 11, Rupley sur, dr out plugs, sur csg set 840 ft; Henderson & Pickering 2, Nancy Dean sur, lot 4, set 1000 ft sur csg, wocs. Magnolia Pet. Co.'s Henderson & Pickering 1, E. Benavides sur, offsetting discovery well on east, ru. The Texas Co.'s A. M. McFaddin 9, J. M. Rine sur, dr 3750 ft. Trans-State Oil Co.'s Robt. Kanster 1, R. Machola gr, w outpost well Coleto Creek, prep to sp.

WEBB COUNTY — Carolina-Texas O&G Trust's Benavides 11, ne sec 683, td 4993 ft, sand 4974-93 ft, set csg to 4974 ft, prep to dr out plugs. Carolina-Texas Oil Co.'s Barnhart 1, sec 262, dr la Garza sur, fsh 2405 ft. Gates Ranch Oil Co.'s A. E. Gates 8, 1320 ft nl and wl sec 59, lcn. Payne et al's Hoggterp 1, blk 6, sec 1110, dr 1920 ft. Arthur Wray's Geo. Stuempke 1, sh 1, Brewster Pasture, Joaquin Galan gr, dr 860 ft.

WILLACY COUNTY—Kingwood Oil Co.'s Stillman Ranch 1, lot 16, blk 30, sh 44, dr 877 ft. South Texas Dev. Co.'s Francisco Armendiez 1-A, sh 4, dr 3820 ft.

WILLIAMSON COUNTY—J. A. Harper's Seggern 1, J. Bevil sur, mim. A. T. Parr et al's Dan Murphy 1, W. J. Cowan sur, 4 mi se Taylor, lcn.

WILSON COUNTY—Universal Oil Co.'s O. F. Burney 1-A, skid over several feet from Burney 1, junked hole, Arocha gr.

ZAPATA COUNTY—Allen & Morris' F. Pena 1, sh 19, por 29, dr 1500 ft. Cos et al's D. Yzaguire 1, 330 ft swl and nel sh 17, por 15, ru. Danvers & Harrison's N. J. Vela 1, blk 7, Vela sub, por 29, coring 2304 ft. H. C. Dean et al's J. M. G. Martinez 1, blk 34, sh B. W. R. Duke sub, Charco Redondo gr, lcn. Joe Palmer's Emma Markford 1, 150 ft nel and nwl blk 22, sur 616, lcn. E. L. Smith Oil Co.'s Hinnant 1, blk 27, sec 307, ru.

TEXAS GULF COAST

ANGELINA COUNTY—Hunter Co.'s Long Bell 1, six mi se of Huntington, J. Durst sur, ru. Lee Tex Oil Co.'s A. H. Geisler 1, 1 mi nw of Lay, S. J. Thompson sur, sd 1120 ft. Pioneer Exploration Co.'s S. L. & B. L. Huffman 1, 6 mi ne of Lufkin, S. Donegan sur, dr shale 832 ft.

AUSTIN COUNTY—Deering & Kayser's T. A. McClenton 1, se of Bellville, Thos. Bell sur, dr shale 751 ft.

BRAZORIA COUNTY—Texas Co.'s Freeport Sulphur Co. 1, 2500 ft e of Canal, Areola sur, circulating in heaving shale at 3760 ft. Turnbull & Irwin's Oliva Allison 1, Fresno area, H. & T. C. sur, sec 79, lot 36, dr shale 4525 ft.

CHAMBERS COUNTY — South Gulf Oil Corp.'s R. M. White 1, Luke Bryan sur, dr shale 1602 ft.

COLORADO COUNTY—Gulf's A. R. Milentz 1, 1¼ mi ne of Rock Island, I&GN sur, sec 33, dr gumbo 1400 ft.

GRIMES COUNTY—Anderson & Kerr's A. Lueder 1, 2½ mi sw of Plantersville, B. Brantly sur, abd 4242 ft. W. B. Roan's Geo. W. Sealy 1, sw of Kellum Springs, B. F. Smith sur, dr 3150 ft.

HARDIN COUNTY—Jack Frazier's Sternenburg 1, nw of Kountz, J. Pearson sur, dr gumbo 2450 ft.

HARRIS COUNTY — Johnson & Johnson and Stanolind's Fee Land 1, s Houston, H. & T. B. sur, coring hard sand 4995 ft. West Prod. Co.'s O. P. Woodburn 1, Genoa, A. Whitlock sur, dr shale 3250 ft.

JASPER COUNTY—Republic Prod. Co.'s Sabine Tram Co. 1, ne of Buna, H&TC sur, sec 71, dr grey sand 7430 ft.

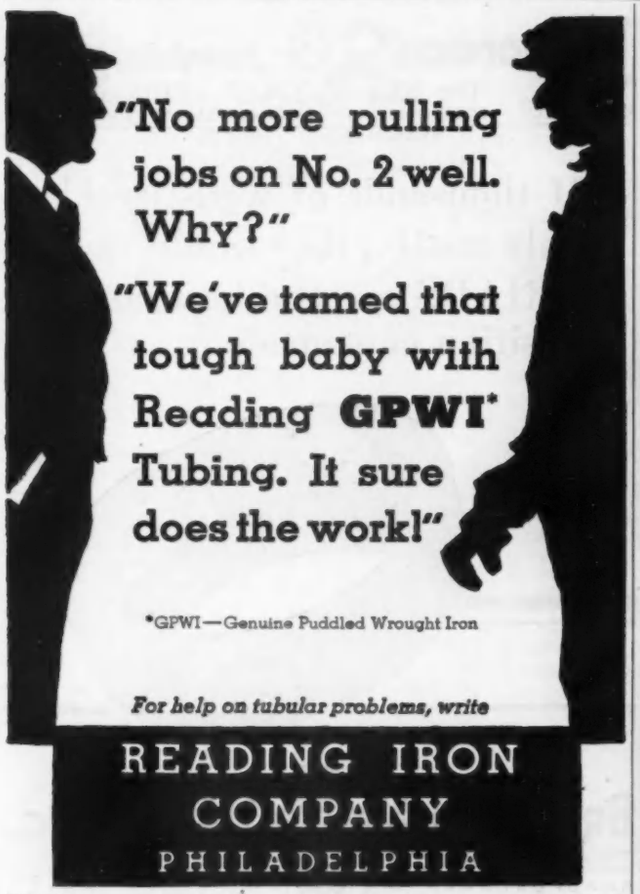
LIBERTY COUNTY—Liberty Independent Oil Co.'s J. M. Neal 1, S. Strong sur, dr shale 4060 ft.

MATAGORDA COUNTY — Continental's Feife 1, Citrus Grove, J. S. Chriswell sur, dk. W. M. Smith Corp.'s Wadsworth 1, Mad Island prospect, S. R. Fisher sur, dr shale 6720 ft.

MONTGOMERY COUNTY—Gholson et al's A. Parker 1, nw of Willis, J. Lindley sur, dr shale 1100 ft.

ORANGE COUNTY—T. S. Ruff's Kaulback 1, 4 mi e of Beaumont, J. Armstrong sur, stuck drill stem at 2110 ft. Ellis Oil Co.'s G. W. Pell 1, s of Terry, J. M. McHernie sur, dr shale 1850 ft.

POLK COUNTY—Gulf's Trinity Lbr. Co.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W. STILES KOONES - MANAGER

1, Oliver Peterson sur, abd loc. Humble's Tex. L. L. L. Co. 1, e of Goodrich, A. Viesca sur, wocs 515 ft.

SAN JACINTO COUNTY—Shell's Moore 1, J. D. Martinez No. 3 sur, clearing lcn.

WALKER COUNTY — S. E. Grey's C. Weinzell 1, se of Riverside, J. J. Porter sur, sd 4010 ft.

WASHINGTON COUNTY—Powers Prod. Co.'s Boenker 1, w of Washington, J. Newman sur, mim.

WHARTON COUNTY—Texas Co.'s Pierce Estate 2-A, I&GN sur, sec 39, ru.

SOUTH LOUISIANA

ACADIA PARISH—Humble's Rice Milling Co. 1, s of Crowley field, sec 27-10s-2e, dr shale 8170 ft. Continental's Ortigo 1, 6 mi nw of Iota, sec 28-7s-2w, mim.

AVOYELLES PARISH—Southern Star Pet. Co.'s I. G. Boyette 1, sec 28-3n-5e, sd 3875 ft. Bell Oil Co.'s Thompson Kratz 2, sec 11-2n-5e, ru.

BEAUREGARD PARISH—C. & K. Drlg. Co.'s Long Bell Lbr. Co. 1, w of Ludington, sec 26-2s-8w, moving in heavy rig, total depth 2736 ft.

CALCASIEU PARISH—Michols McCaleb's Gray 1, 9 mi nw of Starks field, sec 22-8s-13w, sd 868 ft. Buhler Oil Co.'s Faist 2, 900 ft se of No. 1, sec 26-8s-10w, sd 2110 ft. Wheeler Oil Co.'s School Land 1, s of Iowa field, sec 16-9s-7w, dr clay 128 ft.

CAMERON PARISH—Magnolia's Broussard 1, sec 13-12s-9w, dr lime 5104 ft.

EAST BATON ROUGE PARISH—Superior's Duplantier Community 1, University block, s of Baton Rouge, sec 65-7s-1w, ru.

EVANGELINE PARISH—Basile Oil Co.'s Haas 1, 6 mi se of Hampton, sec 14-6s-2w, dr gumbo 450 ft.

IBERIA PARISH—Texas Co.'s State Lake Fausse Point 1, s flank of dome, sec 35-11s-8e, dr shale 3205 ft.

JEFFERSON PARISH—Lincoln Oil Co.'s Rigaud 1, Grand Island, sec 28-21s-25e, sd 7003 ft. Texas Co.'s Bayou St. Denis 1, 6 mi se of Lafitte, sec 19-17s-24e, setting ten three quarters inch casing 9572 ft.

ST. BERNARD PARISH — Emerald Pet. Co.'s Shell Beach Properties 1, on s edge of Bayou Louis, sec 31-13s-15e, dk. John Danciger's Battles 1, near Oliver, sec 135-14s-14e, dr sand 6380 ft.

ST. LANDRY PARISH — C. B. Bunte's Thistlewaite Lbr. Co. 1, Washington prospect, sec 68-5s-4e, preparing to spud.

ST. MARTIN PARISH—Texas Co.'s State Blum Bob 1, Henderson prospect, sec 9-8s-7e, dr shale 7104 ft.

TANIPAHOA PARISH—R. A. Conklin's Lake Superior Piling Co. 1, sec 19-5s-9e, dr sand 4552 ft.

MISSISSIPPI

BOLIVAR COUNTY—White & Jones' Ballou 1, sw ne ne 18-24n-7w, sd for surf cas.

CLARKE COUNTY—L. Beckwith et al's Long-Bell Lbr. Co. 1, sw se 10-2n-16e, elev 378 ft, ru and sd.

JONES COUNTY—Snow-Black Pet. Co.'s Fox 1, se se sw 30-7n-12w, fsg ds, td 4005 ft.

LAUDERDALE COUNTY — Dalton Dev. Co.'s Bounds 1, nw ne 3-6n-15e, sd 1600 ft.

MADISON COUNTY—Cleve Love et al's P. F. Simpson 1, nw nw 30-8n-1w, lcn.

MONROE COUNTY—P. J. McAlpine et al's Crook 1, ne ne 4-13s-18w, fsg liner, td 2338 ft.

MONTGOMERY COUNTY—D. C. Schaffer et al, Fee not given, 31-19-7w, lcn.

RANKIN COUNTY — Cleve Love et al's Boehle 1, nw ne 18-5n-2e, elev 275 ft, top Cane River 720 ft, top Wilcox 1030 ft, top Midway black shale 2330 ft, dr 2335 ft shale.

SIMPSON COUNTY—Berry Corp.'s R. T. Berry 2, sw sw 32-2n-4e, sd 2375 ft marl.

STONE COUNTY—Gulf Ref. Co.'s Dantzler Lbr. Co. 7, se se 36-3s-11w, elev 170 ft, 7-in OD csg 5470 ft, top Selma chalk, sd 6040 ft chalk.

WARREN COUNTY—Harry W. Elliott's R. L. Parker 2, nw nw 14-14n-1e, elev 80 ft, sd high water 1602 ft.

WINSTON COUNTY—Jack Vale's Moody 1, sw nw sw 3-13n-14e, sd 1380 ft.

WASHINGTON COUNTY — Mid-Continent Developments' (formerly Perkins & Dee), Lee 1, 33-15n-8w, arr deepen, td 300 ft.

ALABAMA

COVINGTON COUNTY—Geometer Prod. Co.'s A. B. Culbreth 1 ,sw sw ne 8-2n-14e, dr 5185 ft.

HOUSTON COUNTY—Rice O&G Co.'s Oakley Est. 1, sw nw sw 9-3n-29e, dr upper Tuscaloosa 2750 ft.

LAMAR COUNTY — DeSoto O&G Co.'s Gardner 1, nw nw 22-15s-16w, washing to bottom, td 4182 ft.

FLORIDA

HILLSBOROUGH COUNTY — Southern Pet. Co.'s Mizell & Williams 1, 4-32s-25e, elev 120 ft, re-rigged with heavier equipment, reconditioning hole, td 2100 ft.

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 1, se se 17-24s-25e, elev 110 ft, cavity developed at 418 ft, still trying to reland 12-in csg at 435 ft.

TENNESSEE

FAYETTE COUNTY—Hay-Fay O&G Co.'s Morrison 1 (1 mi n Laconia), top Mississippian (sub-sea) 1549 ft, sd 2500 ft, hd lime rock. Anderson & Kerr's Lesley 1 (near La Grange) old hole junked 1400 ft, skidded dk over for new hole.

HAYWOOD COUNTY—E. Randall Henderson's Jarrett 2 (1½ mi s Brownsville), dr 2560 ft.

Swivels

The National Supply Company, Toledo, Ohio, has ready for distribution Bulletin No. 64, an eight-page folder describing the Ideal swivels that are manufactured in 85-, 150- and 300-ton working capacities.

Drilling Machines

The National Supply Company, Toledo, Ohio, has issued Bulletin No. 63, describing the portable drilling machines it manufactures. It will be mailed upon request.

Manual

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has issued a manual, "Foremanship Development," that is based upon the experience of the company and allied companies. It is intended for both group leaders and the members of conference groups. It is a 60-page, paper-bound, process-printed volume, and will be mailed to anyone upon receipt of $1.00.

Tube Bender

Parker Appliance Company, Cleveland, Ohio, has issued Bulletin No. 39, which describes the production tube bender manufactured by the company.

Screens, etc.

Layne & Bowler Company, Houston, has issued a new catalog describing its full line of oil well screens, packers, plugs and rings.

Electrodes

Metal & Thermit Corporation, 120 Broadway, New York, has issued a 16-page booklet that is devoted to illustrations and descriptions of the "Murex" all-mineral coated welding electrodes it manufactures.

THE OIL WEEKLY
Circulation

Average total distribution for six months ending December 31, 1934.

Mail Subscriptions—Individual	9920
Net Single Copy Sales	426
Mail Subs. Special (Par. 25).....	628
TOTAL NET PAID exclud. Bulk	10,974
Term Subscriptions in Bulk (Par. 26)	104
Single Issue Sales in Bulk (Par. 26)	39
TOTAL NET PAID includ. Bulk..	11,117
Advertisers	242
Samples to Prospective Advertisers..	304
All other unpaid distribution including correspondents, advertising agencies, exchanges, complimentary, subscription salesmen, samples and employees	618
TOTAL DISTRIBUTION	12,281

We hereby make oath and say that all statements set forth in the above Statement are true.

W. J. HUDSPETH, Circulation Mgr.
A. L. BURNS, General Manager.

Subscribed and sworn to before me this 18th day of January, 1935.

J. KENT RIDLEY, Notary Public.

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NEWS *from the* *Industry's* EQUIPMENT MAKERS

Thermoid Company Sales Reach Highest Level in History

Sales of Thermoid Rubber Company and wholly-owned subsidiaries for the first quarter of 1935 showed an increase of more than 32 percent over the same period of 1934, according to Fred E. Schluter, chairman. In March, Thermoid and subsidiaries shipped more tonnage than in any month in the company's 50-year history, excepting one in March, 1929, which exceeded March, 1935, by only 1½ percent. The gain in March this year over March last year was 28 percent, with sales of Southern Asbestos Company, not wholly-owned, also showing improvement over last year.

Two Promotions Made in Baash-Ross Tool Company

Effective May 1, two promotions were announced for the Baash-Ross Tool Company by L. F. Baash, president, an outcome of the increased business.

H. C. Ross, who was one of the founders of the company in California in 1919, and who has been closely identified with the affairs of the company as a large stockholder, a vice president and a director, becomes general sales manager with headquarters at Los Angeles. He is well known in oil circles in California and in the past few years has made several extended trips to the Mid-Continent.

J. B. (Jack) Schuyler, who has been serving as sales manager for California, assumes his new duties as a vice president and as a special sales representative. He has been closely identified with the sale of oil country tools for a number of years, and after service in the sales end of several prominent concerns, both in California and in the Mid-Continent, came to Baash-Ross Tool Company about one year ago.

Maintenance Engineering Sells Commercial Fittings in Texas

The item carried on page 78 of April 29 issue of THE OIL WEEKLY to the effect that Foxboro Company has been made exclusive agent for Commercial Orifice Fittings (Commercial Iron Works) was in error in that Maintenance Engineering Corporation of Houston has been representing Commercial Iron Works since 1931 and still is representing the company in the Texas territory, having signed a new contract to this effect on April 3 of this year.

Foxboro Company does represent Commercial Iron Works exclusively in all parts of the United States except Texas.

J. B. SCHUYLER
Vice President, Baash-Ross Tool Company

H. C. ROSS
Vice President and Sales Manager, Baash-Ross Tool Company

Farrel-Birmingham President Is Making European Tour

N. W. Pickering, president of Farrel-Birmingham Company, Inc., Ansonia, Connecticut, and Buffalo, New York, sailed on the Britannic April 8 for a two months trip which will take him to a number of countries of Europe. The trip is one combining business with vacation and Mr. Pickering will spend some time with the company's representatives in England, France, Sweden and Norway. He also will visit Germany and Italy. Mrs. Pickering accompanied her husband to England, where she will visit relatives.

F. W. Thomas Joins the Staff Of John Waldron Corporation

F. W. Thomas, for the last ten years New York district manager of the coupling division of The Bartlett Hayward Company, has joined the staff of John Waldron Corporation of New Brunswick, New Jersey, as general manager of sales of the Francke coupling and silent gear departments.

As of July 15 the sales staff of John Waldron Corporation will handle the sale of its products directly in place of through Smith and Serrell of Newark, New Jersey, who have functioned as general sales agents heretofore.

M. G. McCool Now Representing American Iron & Machine Works

M. G. McCool, who is well known because of his many years experience in oil field supply business, now is representing American Iron & Machine Works Company, of Oklahoma City.

John Riley, sales manager for American Iron & Machine Works Company, is now on a trip with McCool through West Texas and New Mexico. Midland, Texas, is headquarters for this territory. McCool was formerly with Oil Well Supply Company.

Baker Oil Tool Company Opens Large Tulsa Office

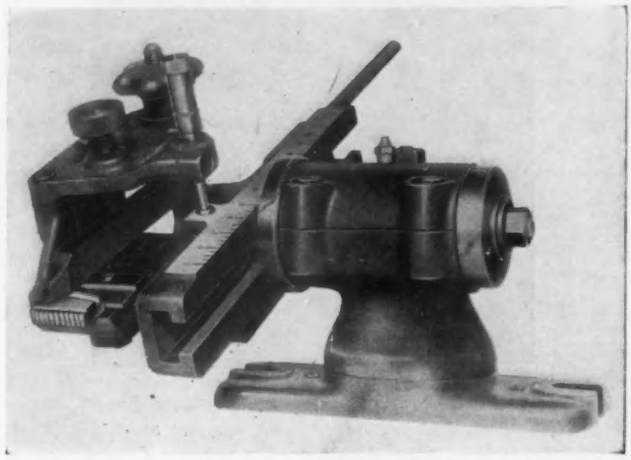
Baker Oil Tools, Incorporated, Huntington Park, California, has announced the removal of its office, warehouse, service departments and equipment stocks from Oklahoma City to Tulsa. Paul V. McGivern continues as district manager with the new address at 312 East Fourth Street, Tulsa, and R. C. Glover remains as representative in the Oklahoma City territory.

Ben Morey Joins Lane Wells Company Staff

Ben Morey, formerly president of Morey & Jones, Ltd., of Los Angeles, manufacturers of metering devices, has joined the staff of Lane Wells Company, manufacturers of oil tools and operators of gun perforator service.

New Equipment for the Field

Machinery .... Tools .... Catalogs .... Books



Landis Grinding Attachment

Grinding Attachment

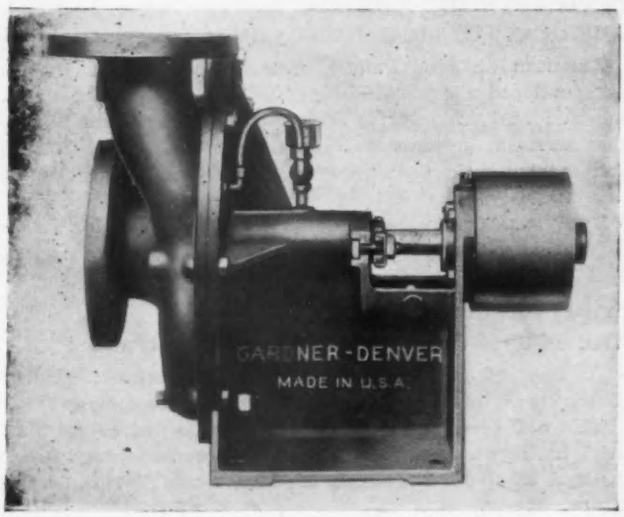
LANDIS MACHINE COMPANY

Landis Machine Company, Waynesboro, Pa., has announced a new grinding attachment for regrinding the throat or chamber of its collapsible tap chasers. The base of the throat grinding attachment is arranged for bolting to the table of most standard makes of tool and cutter grinding machines. The vise base is adjustable for setting the chasers on a radius corresponding with that of the thread which they are to cut. The base is graduated for diameters from one inch to 13½ inches.

Centrifugal Pumps

GARDNER-DENVER COMPANY

Gardner-Denver Company, Quincy, Illinois, has introduced a new line of centrifugal, side-suction pumps which the manufacturer claims combine advantages previously not available in single units of similar capacity. The pumps were designed for general service conditions.



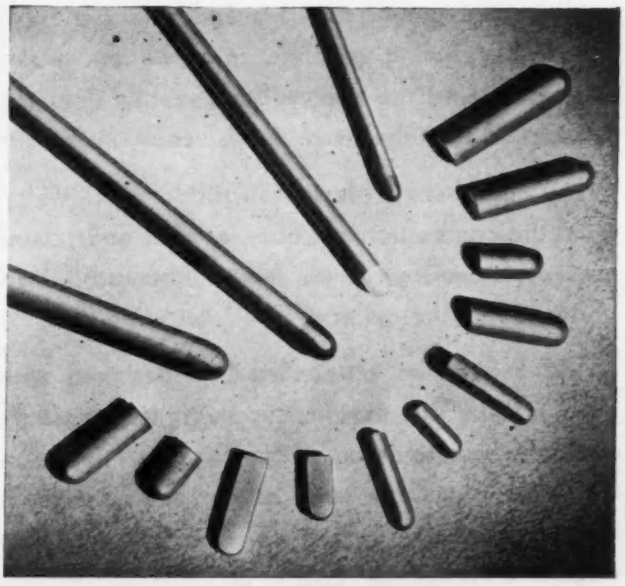
Gardner-Denver Centrifugal Pump

The Types B and C will handle up to 500,000 gallons per day, or 450 gallons per minute at heads up to 100 feet. Only a minimum of machining is done in the propellers. This causes the hard outside skin, normal to cast iron, to give longer life. Smoothness is obtained by a special foundry process. The only moving parts in the pump are the shaft, impeller and bearing. A heavy-duty ball bearing at the pulley end of the shaft takes the thrust load and the belt pull, while at the impeller end of the shaft, where the load on the bearing is light, a lubricated sleeve bearing is used. Water is piped to this bearing to lubricate it in case the attendant neglects to fill the grease cup.

Hard-Facing Materials

HAYNES STELLITE COMPANY

Haynes Stellite Company, Kokomo, Indiana, has announced the addition of a series of new rods to its line of hard-setting and hard-facing materials. It will be called "Tube Haystellite." The addition of this new line makes available to the oil industry a complete selection of rods for every purpose. The new rods are obtainable in 14-inch lengths, and in ⅜-, 5/16-, ¼- and 3/16-inch diameters. All sizes consist of approximately 60 percent Haystellite and 40 percent Oxweld No. 1 high test steel, by weight.



"Tube Haystellite"

Bronzoid Treated Lead

BRONZOID LEAD CORPORATION

Bronzoid Lead Corporation, Dallas, Texas, announces a new material for bearings and bushings, known as Bronzoid treated lead. The purpose of the product is to permit the manu-

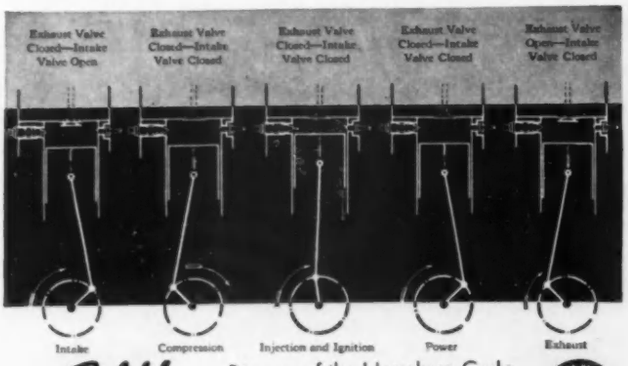


Diagram of the Hesselman Cycle

Why

THE HESSELMAN

starts easily

The location of the rings provides an unobstructed path for heat flow from the head to the skirt.

It is as easy to start a Waukesha-Hesselman Oil Engine as a gasoline engine. A primer is used as with a gasoline engine and hand cranking is just as feasible. The primer atomizes and sprays a small charge of priming gasoline into the air intake manifold. And the charge flows readily into the cylinder through the overhead valves.

The cup shaped Hesselman piston head, which forms the combustion chamber, catches and retains any excess priming charge. And it is burned instead of destroying the cylinder wall lubricating film.

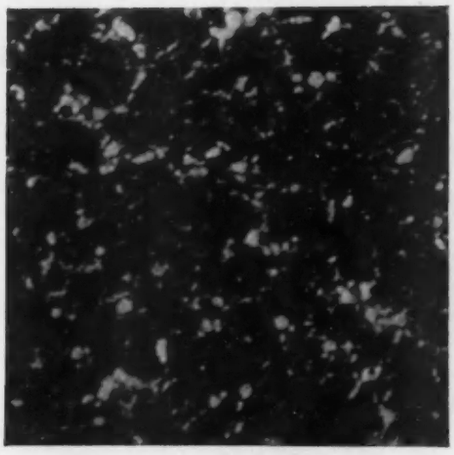
The Hesselman piston head is designed with extra metal. This aids in supplying and holding sufficient heat to insure a combustible mixture at the spark plug. As soon as the engine fires, it begins to function on fuel oil. Even in the coldest weather, a Hesselman requires no more priming, nor any longer warm-up period than a gasoline engine.

Write* for Bulletin 1000. *Waukesha Motor Company, Waukesha, Wisconsin.

THIS IS No. 4 OF A SERIES on the Hesselman Oil Engine. No. 5 will appear next month. A reprint of the complete series will be mailed on request.

WAUKESHA ENGINES

facturers of bearings and bushings to secure a better lead distribution so that less scoring and longer wear is possible. This distribution is illustrated in the accompanying microphoto showing the distribution in a high lead bronze bearing, magnified from a section 0.055-inch square, giving a magnification of 45 diameters.



Magnified Section of Bronzoid Treated Lead

Prior to going into commercial production on Bronzoid treated lead, the manufacturers completed long tests both in manufacturing shops of oil equipment companies, and also on equipment operating in the field. A test of two bearings for the purpose of the value of showing the results of the new lead distribution illustrates results of interest to oil tool makers.

Steel

REPUBLIC STEEL CORPORATION

Republic Steel Corporation, Youngstown, Ohio, has announced a new high tensile strength steel product that is a copper-nickel-molybdenum ferrous alloy with yield point and tensile strength sufficiently higher than ordinary carbon steel to permit use of 30 to 40 percent lighter sections without sacrifice of strength or safety factor. Good corrosion-resisting and forming qualities are claimed for the steel by the manufacturer. The steel is made in two carbon ranges, and is available in the usual commercial forms.

Well Treating Chemical

AMERICAN CHEMICAL PAINT COMPANY

American Chemical Paint Company, Ambler, Pennsylvania, has developed a new chemical, called Murodine, for use with muriatic acid in acidizing wells. The manufacturer claims that Murodine prevents the action of the acid on well tubings and casings but does not hamper the action of the acid on lime stratas.

The process of using Murodine is called Murodizing and it is said to be simple, inexpensive, and singularly effective.

Alloy Steel

THE YOUNGSTOWN SHEET & TUBE COMPANY

A new alloy steel has just been announced by The Youngstown Sheet & Tube Company, Youngstown, Ohio.

This new product, known as Yoloy, is a nickel copper alloy steel, having an exceptional resistance to corrosion, high tensile strength combined with high ductility, workability and weldability.

Yoloy steel is produced in sheets, strips, plates, bars, shapes, wire and seamless pipe.

Squeaks *from the* BULL WHEEL

"Why, you've lost your leg, haven't you?"

"Well, darned if I haven't."

"Dear, I saw the sweetest, darlingest hat downtown today."

"All right, put it on and let's see it."

The professor rapped on his desk and yelled: "Gentlemen! Gentlemen! Order please!"

Whereupon the entire class shouted as one man: "Beer!"

Do you ever pause and reflect on the opportunities you have missed?

No. It would be just my luck to miss some more while I was reflecting.

A man complained to the local postmaster because of the failure to deliver a letter improperly addressed. "Now suppose," he continued, "I addressed a letter to the 'Biggest Dumbell in Christendom,' what would you do toward delivering it?"

"I should simply mark it 'Return to Sender,'" returned the postmaster.

A case worker had stopped in the home of a family at Lewiston, Montana, to investigate a relief application. The family seemed to be in need, and the investigator had decided to approve an order for relief before he asked the usual question of whether the family had any money in the bank. The father declared they had—something like $1000.

"What's to hinder your using that to tide you over?" the investigator asked.

"Oh, we couldn't possibly do that," the father protested; "we are saving that for a rainy day."

Discovering yet another mistake in his letters, the enraged employer summoned his new typist.

"You came here with good testimonials, Miss Brown," he barked, "and do you mean to tell me that you don't know the King's English?"

"Of course I know it," she replied, indignantly. "Otherwise he wouldn't be King, would he?"

Two women were waiting for a bus, which was nearly full when it came along.

"Room for one inside and one on top," said the conductor.

"But surely you wouldn't separate mother and daughter."

"I did once," replied the conductor, as he rang the bell, "but never again."

I have a certificate from my doctor, saying I cannot act today.

Too bad you had to go to all that trouble. I could have given you a certificate saying you never could act.

Now, Miss, what gear were you in at the time of the accident?

Oh, I had on a black beret, tan shoes and a tweed sports dress.

Well, don't you find this office force just like one big family?

Why, no; everybody's been quite friendly so far.

Why isn't my supper ready?

I've been down town bargain hunting all the afternoon, and I just couldn't get home in time.

Huh; lookin' for somethin' for nothin', I presume.

Yes; looking for a birthday present for you.

"What will your father say when he knows we're engaged?"

"Oh, he'll be delighted. He always is."

I can cure your husband of talking in his sleep, if that's all you want.

Couldn't you just give him something that would make him talk more distinctly.

A banker was attending a convention dinner in Atlantic City. He had tarried too long over his wine glass, and on the way home walked headlong into an iron tree guard. Clutching the bars, he groped his way around them two or three times, feeling each one of the bars as he went.

"Dammit," he exclaimed, "isn't this hell! I'm in the hoosegow again."

Nurse (in mental hospital)—There's a man outside who wants to know if any of our men patients have escaped lately.

Doctor—Why does he ask?

Nurse—He says somebody has run off with his wife.

Your husband's not so well today, Mrs. Maloney. Is he sticking to the simple diet I prescribed?

"He is not, sorr," came the reply. "He says he'll not be after starvin' himself to death just for the sake of livin' a few years longer."

The shopper had reason to complain. "This is a small loaf for nine cents," she said.

"Well, you'll not have so much to carry," replied the shopkeeper, smilingly.

"Then here's six cents," replied the shopper. "You'll not have so much to count."

"Jane," said a lady to her servant, "you have broken more than your wages amount to. What can be done to prevent this?"

"I really don't know, mum," said Jane, "unless you raise my wages."

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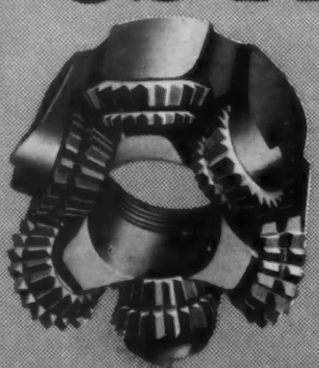

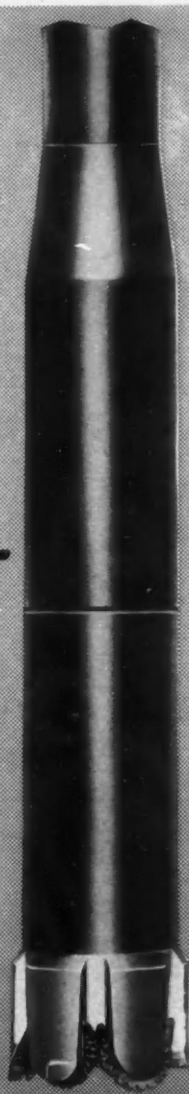

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